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EXPLORING THE RELATIONSHIP BETWEEN PLANNING AND TRAINING,  
AND RESPONSE TO CAMPUS SAFETY INCIDENTS

BY

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DISSERTATION

Submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy in Education  
in the Graduate School of the  
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St. Louis, Missouri

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## ABSTRACT

Over the past 50 years, campus violence has significantly impacted our institutions of higher education. As a result, campus safety has become an increasingly important topic for all colleges and universities. The Virginia Tech tragedy in 2007 highlighted the necessity of emergency management planning and training as well as employee understanding of the Family Educational Rights and Privacy Act (FERPA).

Emergency management plans for 27 institutions in Missouri were collected and evaluated to determine how they instructed employees to respond to various campus safety scenarios and how training factored into the campus plans. Two-hundred, fifty-one employees were then surveyed to see how consistently and accurately they responded to two campus safety scenarios, based on the instructions given in their particular campus plans. Employee understanding of FERPA was also reviewed to identify how well administrators, faculty, and staff comprehend student privacy regulations.

The following conclusions were established as a result of this study. (a) While most institutions have emergency management plans in place, these plans are not well read or understood. (b) Many emergency management plans are not comprehensive and are inconsistent across the state of Missouri. (c) Minimal participation in annual training as part of emergency management planning occurs at our public higher education institutions in Missouri, especially for faculty. (d) Participation in training does not indicate that an institution is better prepared to respond to campus safety incidents. (e) Employees do not understand what information may be shared under FERPA as well as what information is not subject to FERPA regulations. (f) Some institutions, and some

individuals, are hesitant to discuss or evaluate emergency preparedness in response to campus safety incidents.

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## CHAPTER 1: OVERVIEW

### Introduction

“Knowing what to do when faced with a crisis can be the difference between calm and chaos, between courage and fear, between life and death” (U.S. Department of Education, 2007, p. 1-2). This statement from the introduction to the U.S. Department of Education’s *Practical Information for Crisis Planning* reminds us that campus violence is a reality for institutions of higher education. The days of feeling completely safe and secure while attending a college or university no longer exist. Although some individuals still regard higher education institutions as safe havens where nothing bad can happen, the events of recent years are reminders that our postsecondary institutions must be prepared for the unthinkable. Colleges and universities must be ready to respond to incidents of campus violence to ensure the safety of the campus community.

As illustrations of this reality, a number of campus shootings have occurred over the past 50 years. The University of Texas clock tower attack by former student Charles Whitman in August of 1966 was considered the nation’s worst mass shooting up to that time. A total of 16 people were killed, and another 31 wounded when Mr. Whitman fired a rifle from the University of Texas-Austin clock tower (Roberts, 2007). Forty-one years later, the Virginia Polytechnic Institute and State University (Virginia Tech) tragedy became the nation’s worst mass shooting in April of 2007. Seung Hui Cho, an undergraduate student majoring in English, killed 32 students and faculty, wounded 17 additional people, and then killed himself (Virginia Tech Review Panel, 2007). Despite these horrific events, the Virginia Tech Review Panel (2007) indicated that “Shootings at universities are rare events, an average of about 16 a year across 4,000 institutions”

(p. 18). Yet 16 shootings annually is hardly an acceptable safety record for higher education and is one that would shock and shame any other developed nation.

The Virginia Tech tragedy brought to light a number of concerns related to campus safety and emergency preparedness, including concerns about comprehensive training for faculty, staff, and students and adherence to privacy laws. The Virginia Tech Review Panel (2007) recommended that training on all types of emergencies be conducted annually for all faculty, staff, and students. In addition, the Panel expressed concern about the lack of understanding of privacy laws and the inconsistent practice when applying privacy laws to college and university security situations.

As a result of incidents like those cited above, most institutions have a comprehensive emergency management plan in place, which will be referred to in this study as an all-hazards emergency management plan. One of the most important components of an all-hazards emergency management plan is training. In the *Action Guide for Emergency Management at Institutions of Higher Education*, the U.S. Department of Education (2009) stated the following:

The more the plan is practiced and people are trained on the plan, the better the campus responds to emergencies in a comprehensive and effective manner....Exercises are an effective way to identify gaps and weaknesses in the plan and to train students, staff, faculty, and campus administrators in the emergency management procedures. (p. 51)

Although it is important to have a comprehensive plan that covers all hazards, the focus of this research study is campus violence, which is only one component of an all-hazards emergency management plan.

Federal laws, such as the Family Educational Rights and Privacy Act (FERPA), play a significant role in how administrators, faculty, and staff can plan for and respond to incidents that may impact campus safety. If suspicious behavior occurs, college personnel may be forced into a dilemma concerning student right to privacy and institutional right to safety. *The Ripple Effect of Virginia Tech* (2008) indicated “The Virginia Tech tragedy brought into the spotlight the often difficult task of balancing individual privacy rights with the need to communicate with appropriate authorities when a student exhibits disturbing or threatening behavior” (Midwestern Higher Education Compact, p. 13). When faculty and staff are unclear as to how to interpret federal regulations, institutions of higher education may be at risk.

#### Purpose of the Study

This research study examined the relationship between active faculty/staff participation in training exercises as part of implementation of an all-hazards emergency management plan and the consistency and accuracy of response to potential campus safety incidents in higher education. The research also reviewed the relationship between implementation of an all-hazards emergency management plan that includes faculty/staff participation in training exercises and knowledge of FERPA regulations when responding to potential campus safety incidents in higher education.

The purpose of this study was to provide research that allows colleges and universities to determine if training is effective, and if employees who say they have been trained actually indicate that they know the institution’s emergency management plan and would respond appropriately when presented with potential campus safety incidents. The findings of this study reform the discussion related to the effectiveness of planning and training in preparing a college community for a violent situation.



### Statement of the Problem

Virtually everyone working in higher education today is aware of the potentiality of a violent campus incident, and most institutions now have an all-hazards emergency management plan in place. Yet little research has been performed that examines the amount of training college employees receive related to the plans, the degree of understanding faculty and staff have of the requirements of the plans, and the consistency with which they are understood across campus. Since a plan is no better than an institution's ability to implement it, a plan that is poorly or inconsistently understood will have limited value in case of a campus emergency. Research is critically needed to determine how well the myriad of all-hazards emergency management plans have been assimilated into the culture of the institutions they are designed to protect.

### Hypotheses

The following hypotheses guided this research and directed the methodology employed to acquire and analyze data:

*Hypothesis #1:* Personnel at higher education institutions with an all-hazards emergency management plan that includes training will respond more consistently to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training.

*Hypothesis #2:* Personnel at higher education institutions with an all-hazards emergency management plan that includes training will respond more accurately to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training.

*Hypothesis #3:* Personnel at higher education institutions with an all-hazards emergency management plan that includes training will have more knowledge of FERPA regulations

when responding to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training.

*Hypothesis #4:* There will be more consistency in response to potential campus safety incidents by personnel in similar positions at various higher education institutions when the institutions have all-hazards emergency management plans that include training than institutions that have all-hazards emergency management plans that do not include training.

*Hypothesis #5:* There will be more knowledge of FERPA regulations when responding to potential campus safety incidents by personnel in similar positions at various higher education institutions when the institutions have all-hazards emergency management plans that include training than institutions that have all-hazards emergency management plans that do not include training.

*Hypothesis #6:* Personnel in administrative positions at higher education institutions will respond more accurately to potential campus safety incidents than personnel in non-administrative positions.

### Scope of the Study

A quantitative methodology was employed as a means for both gathering and analyzing data for this study. Two campus safety incident scenarios were presented to a group of selected employees at public college campuses in the State of Missouri, followed by a series of closed-ended questions. The sample population included presidents, chief academic officers, deans of student services/student affairs, registrars, full-time faculty members, public safety directors/chiefs of police, public safety officers,

health/mental health professionals, human resource directors, housing directors, and the emergency preparedness contact person at each college or university.

The following were delimitations of this research study:

1. This research study was limited to public institutions of higher education in Missouri.
2. The sample population was limited to the personnel in colleges and universities selected by the researcher listed above. While others may well be involved in implementing the plan, this group, by nature of their positions, was seen as critical to effective execution.
3. Students and adjunct faculty were not included in the sample. Their understanding of the emergency management plan may be important in a number of ways, but the focus of this research was on full-time personnel.

#### Limitations of the Study

This study was limited by several factors that are indicative of characteristics of both the nature of the study and the institutions involved. Some institutions, especially community colleges, did not have all participant positions, including health/mental health professional, housing director, and public safety departments. Additionally, two of the two-year institutions are part of community college districts and have district coordinators for the Human Resources and Registrar departments. Two institutions also did not specifically identify an emergency preparedness contact person, but utilize a group of individuals to serve in this capacity. In these cases, there were not comparable responses from each institution.

The study was further limited by the fact that some institutions did not provide emergency management plans, and by the vast differences among plans in terms of completeness. This finding is important to the study because in some cases, it did limit the ability of the model to compare responses by participants to statements in their institutional plans.

The researcher does not, however, see these potential limitations as seriously compromising the study since response rates were sufficient from community colleges, and very few institutions did not have or did not provide emergency management plans.

### Definition of Terms

The following definitions were utilized for important terms and concepts used in this study to insure clarity and understanding. Some of these definitions are provided to describe how the researcher used them, specifically in terms of this study.

*Accuracy of Response:* How accurately higher education personnel respond to personal and institutional questions following two campus safety incident scenarios that are presented, based on the institution's all-hazards emergency management plan.

*Administrator:* Full-time employees at public institutions of higher education, including the following positions: president, chief academic officer, and dean of student services/student affairs.

*All-Hazards Emergency Management Plan:* A plan that "develops capacities and capabilities that are critical to prepare for a full spectrum of emergencies or disasters, including natural hazards and severe weather, biological hazards, and violence and terrorism" (U.S. Department of Education, 2009, p. 4).

*Campus Violence:* "An event, often sudden or unexpected, that disrupts the normal operations of the institution or its educational mission and threatens the well-being of

personnel, property, financial resources, and/or reputation of the institution” (Zdziarski, 2006, p. 5).

*Consistency of Response:* How similarly higher education personnel respond to personal and institutional questions following two campus safety incident scenarios that are presented, based on the institution’s all-hazards emergency management plan.

*Faculty:* Full-time instructors at public institutions of higher education.

*Family Educational Rights and Privacy Act (FERPA):* “A federal law that protects the privacy of students’ ‘education records’....FERPA applies to educational agencies and institutions that receive funds under any program administered by the U.S. Department of Education” (U.S. Department of Education/U.S. Department of Health and Human Services, 2008, p. 1).

*Knowledge of FERPA Regulations:* The appropriate response to questions concerning FERPA.

*Mitigation:* The phase in institutional emergency management planning that involves “the action colleges and universities take to eliminate or reduce the loss of life and property damage related to an event or crisis, particularly those that cannot be prevented” (U.S. Department of Education, 2009, p. 7).

*Preparedness:* The phase in institutional emergency management planning that “designs strategies, processes, and protocols to prepare the college or university for potential emergencies” (U.S. Department of Education, 2009, p. 9).

*Prevention:* The phase in institutional emergency management planning that involves “the action colleges and universities take to decrease the likelihood that an event or crisis will occur” (U.S. Department of Education, 2009, p. 7).

*Recovery:* The phase in institutional emergency management planning that “establishes procedures, resources, and policies to assist an institution and its members’ return to functioning after an emergency” (U.S. Department of Education, 2009, p. 14).

*Response:* The phase in institutional emergency management planning that involves “taking action to effectively contain and resolve an emergency” (U.S. Department of Education, 2009, p. 12).

*Staff:* Full-time employees at public institutions of higher education, including the following positions: registrar, public safety director/chief of police, public safety officer, health/mental health professional, human resource director, housing director, and emergency preparedness contact person.

*Training:* Participation in annual training related to campus violence at the institutional level.

*Training Exercises:* Orientation meetings, tabletop exercises, drills, functional exercises, and/or full-scale exercises (U.S. Department of Education, 2009).

### Significance of the Study

Campus violence is a topic that is familiar to all. Whether a loved one has been lost or the impact of a tragedy has been felt from miles away, campus violence is a reality for all Americans. For the safety of faculty, staff, and students, institutions of higher education must be proactive in preparing for potential incidents of campus violence. This study researched the importance of having an all-hazards emergency management plan in place which is supplemented by regular training exercises for all faculty and staff. Its findings reform the discussion related to the effectiveness of planning and training in preparing a college community for a violent situation. Additionally, the importance of

understanding FERPA regulations was reviewed, and the study determined how well informed the participant community is about these important regulations.

When this research study was undertaken, it was determined that if the results of this research study indicated there was a significant relationship between implementation of an all-hazards emergency management plan that includes faculty/staff participation in training exercises and (a) consistency of response to potential campus safety incidents within an institution, (b) accuracy of response to potential campus safety incidents within an institution, and (c) knowledge of FERPA regulations when responding to potential campus safety incidents within an institution, then colleges and universities should commence and/or update training exercises at their respective institutions as soon as possible. All faculty and staff should be required to participate in training exercises.

If the results did not indicate a significant relationship between implementation of an all-hazards emergency management plan that includes faculty/staff participation in training exercises and consistency of response, accuracy of response, and knowledge of FERPA regulations when responding to potential campus safety incidents within an institution, then further research should be conducted to determine what influences consistency and accuracy of response and knowledge of FERPA regulations within higher education institutions and how training and institutional responsiveness can be made more effective.

Additionally, it was determined that if the results indicated there was a significant relationship between implementation of an all-hazards emergency management plan that includes faculty/staff participation in training exercises and consistency of response to potential campus safety incidents by personnel in similar positions at various higher

education institutions and knowledge of FERPA regulations, but a clear difference in levels of knowledge and understanding between positions, then colleges and universities should commence and/or update training exercises at their respective institutions as soon as possible. All faculty and staff should be required to participate in these training exercises. If the results of this research study indicated there was not a significant relationship between implementation of an all-hazards emergency management plan that includes faculty/staff participation in training exercises and these two factors, then further research should be conducted to determine what influences consistency of response and knowledge of FERPA regulations among personnel in similar positions at various higher education institutions.

The same can be said of accuracy of response. After conducting this study, if personnel in similar positions responded more accurately than others, training must be revised to increase levels of understanding for those groups who demonstrated lower levels of knowledge. If the results of this research study indicated there was not a significant relationship between personnel in administrative positions responding more accurately to potential campus safety incidents than personnel in non-administrative positions, then further research should be conducted to ensure that all personnel are responding accurately to potential campus safety incidents.

In the State of Missouri where this research was conducted, the Higher Education Subcommittee of the state's Homeland Security Advisory Council is encouraging statewide training. If this research study finds that faculty/staff participation in training exercises is significantly related to consistency and accuracy of response and knowledge of FERPA regulations, then this study supports statewide efforts to promote the



importance of training the campus community and will encourage further professional development efforts.

### Summary

Campus violence is a reality for institutions of higher education. Colleges and universities must be proactive in educating and training the campus community for potential campus safety incidents. This chapter provided an overview of the growth in campus violence and outlines a study that examines the effectiveness of training when included in college and university emergency management plans. Six hypotheses were presented that suggest that a relationship will exist between the amount of training an employee receives and the consistency and accuracy with which each person will respond to a crisis situation, as called for in the institution's emergency management plan. The scope of the study, limitations, definition of terms, and significance of the study were reviewed.

The following chapters provide additional foundation for this research study. Chapter 2 presents an overview of the literature that is pertinent to campus violence and emergency preparedness but indicates deficiencies in the existing body of knowledge concerning the effects of planning on employee response. It demonstrates that although campus preparedness has become an issue of great concern, too little has been done to evaluate familiarity with the institution's emergency management plan and individual responsiveness. Chapter 3 provides details on the methodology that was used for this research study, and Chapter 4 provides a review of the findings. The final chapter, Chapter 5, analyzes these findings, makes recommendations for better and more effective institutional planning and response to campus crises, and suggests other areas of research that will address additional gaps in the body of literature.

## CHAPTER 2: REVIEW OF THE LITEATURE

### Introduction

“Educational institutions are no longer viewed as safe havens for students, faculty, or staff. Violence is a community and societal problem that has found its way into institutions of higher education” (Schuh, 1998, p. 347). This quote from *Violence on Campus: Defining the Problems, Strategies for Action* demonstrates the critical need for additional research about both campus crime and the plans and activities being developed by postsecondary institutions to prevent and minimize it. As a prelude to describing such a study, this chapter provides a brief summary of the literature related to campus violence at institutions of higher education, the four phases of emergency management, the creation of threat assessment teams, the importance of an all-hazards emergency management plan, the significance of training exercises, the Family Educational Rights and Privacy Act (FERPA), and the Clery Act.

### Campus Violence at Institutions of Higher Education

Over the past 50 years, college and university campuses have become the sites of a series of fatal shootings that have changed forever our understanding of campus security. The University of Texas shooting by former student Charles Whitman was considered the nation’s worst mass shooting when it occurred in August of 1966. Mr. Whitman, an abused child and former Marine, killed 16 people and wounded another 31, when he fired a rifle from the University of Texas-Austin clock tower for 96 minutes. In a written note, Mr. Whitman blamed his father for his actions (Macleod, 2009; Roberts, 2007). Twenty-five years later, in November of 1991, Gang Lu, a student who had recently completed his doctoral degree, went on a shooting rampage at the University of

Iowa. Mr. Lu was upset that he had not received an award for his dissertation and fatally shot three professors who served on his dissertation committee as well as a vice president and her receptionist before killing himself (Marriott, 1991).

The next major incident occurred during a student's thesis defense in August of 1996. Frederick Martin Davidson, a former soldier, was a graduate student in engineering at San Diego State University. Mr. Davidson deeply resented three of his engineering professors and fatally shot these professors during his defense (Nash, 2004). In August of 2000, James Easton Kelly, a graduate student at the University of Arkansas, was dismissed from the Comparative Literature program. Mr. Kelly went to campus and killed his advisor, who was also the chair of the committee that denied his reinstatement to the graduate program, and then killed himself (CBS News, 2000). Two years later, Peter Odighizuwa, a student who flunked out of Appalachian School of Law, went on a January shooting spree, killing the Dean of the law school, one professor, and one student and injured three other students before he was restrained by students (CNN, 2002). A few months later in October of 2002, Robert Flores, a nursing student at the University of Arizona, killed three of his professors and then committed suicide. Mr. Flores, an Army veteran who had many personal problems, was taking revenge on his professors for failing him (Smallwood, 2002). On a campus visit to Shepherd University in September of 2006, Douglas Pennington, a man who was being treated for mental illness, killed his two sons and then committed suicide (Marcum, 2010).

Forty-one years after the University of Texas mass shooting, the Virginia Polytechnic Institute and State University (Virginia Tech) tragedy became the nation's worst mass shooting in April of 2007. Seung Hui Cho, an undergraduate student majoring

in English who had a history of mental health concerns and disturbing behaviors, killed 32 students and faculty, wounded 17 additional people, and then killed himself (Virginia Tech Review Panel, 2007). Less than a year later, two shootings occurred in February of 2008. On February 8, Latina Williams, a nursing student, killed two students and then herself at Louisiana Technical College. No connections were found between Ms. Williams and her two victims (Fox News, 2008; Hoover, 2008). On February 14, Stephen Kazmierczak, a former Northern Illinois University student who was currently enrolled in graduate studies at the University of Illinois at Urbana-Champaign, walked into an introductory geology class, killed five students, and injured 16 others at Northern Illinois University before committing suicide. Mr. Kazmierczak was discharged from the Army for psychological issues, had spent time in a psychiatric facility, and had quit taking his medicine (Friedman, 2008; Heinzmann, et al., 2008). In December of 2009, James Hamilton, a student at Northern Virginia Community College with a history of mental health problems, attempted to shoot his math teacher because he was failing her class. After firing two shots and attempting a third, Mr. Hamilton left the classroom, sat on a chair in the hallway, and calmly waited for the police to arrive (Barakat, 2011; Urbina, 2009).

In 2010, campus violence assumed a different face at our colleges and universities as college employees became the perpetrators of crime. In March of 2010, a custodian at Ohio State University by the name of Nathaniel Brown was distraught over the impending loss of his job and his home. Mr. Brown killed one of his supervisors and injured another employee (10TV, 2010). A few months later in August, a biology faculty member at the University of Alabama-Huntsville opened fire during a biology faculty

meeting. Amy Bishop had been denied tenure and fatally shot three biology professors and injured two other professors and an assistant (Wheaton and Dewan, 2010).

The University of Texas-Austin was again the victim of campus violence in September of 2010. Colton Tooley, a math major who was dressed in a business suit and a ski mask, fired several rounds into the air while running through campus before committing suicide (Goldman, 2010). Teachers, family members, and friends were shocked at Mr. Tooley's behavior. There was little explanation for his actions. He was known as kind, quiet, and intelligent, not someone who would commit such a violent act (Gay, 2010). One month later, Christopher Amyx, a student at Mid-Atlantic Christian University who was a part-time police officer, shot another student during an argument in the dormitories. Mr. Amyx claimed he had been receiving threats and fired his weapon in self defense (CBN News, 2010; "Part-Time Cop Charged," 2010). These incidents demonstrate our long and continuing history of campus violence and emphasize the need for institutions of higher education to be prepared to respond to potential campus safety incidents.

### Phases of Emergency Management

Partially in response to the high profile incidents mentioned at the beginning of this chapter, emergency management has become a familiar term to all institutions of higher education. The days of feeling completely safe and secure on the college campus no longer exist. To assist institutions in preparing for campus emergencies, the U.S. Department of Education and Federal Emergency Management Agency (FEMA) issued in 2009 an action guide which outlines four phases of emergency management preparation and response. These phases include prevention-mitigation, preparedness,

response, and recovery. All of the phases are related to one another and build on the previous phase (FEMA, 1996). A brief overview of each phase of emergency management follows.

### *Prevention-Mitigation*

Prevention-Mitigation is the first phase in emergency management. According to the U.S. Department of Education (2009), “Prevention is the action colleges and universities take to decrease the likelihood that an event or crisis will occur” (p. 7). “Mitigation is the action colleges and universities take to eliminate or reduce the loss of life and property damage related to an event or crisis, particularly those that cannot be prevented” (p. 7). Mitigation also includes educating individuals to reduce the possibility of incidents occurring. Mitigation is designed to make campuses safer; however, it does not remove all threats from a campus (FEMA, 1996). The components of prevention-mitigation include analyzing data on the campus community, such as campus crime data and campus vulnerability data; examining the facilities and grounds of each campus to identify vulnerabilities; and evaluating the culture and climate of the campus community (U.S. Department of Education, 2009).

### *Preparedness*

Preparedness is the second phase in emergency management. “The Preparedness phase designs strategies, processes, and protocols to prepare the college or university for potential emergencies” (U.S. Department of Education, 2009, p. 9). The components of preparedness include developing a command center to activate if an emergency occurs, creating policies and procedures in collaboration with community partners, and partnering with the community to create formal agreements. Another important

component is developing contracts to provide the campus community with necessary resources, such as food and transportation, in the event of an emergency. Identifying the chain of command in an emergency situation and developing detailed plans to ensure that the campus will continue to function in the event of an emergency are essential in the preparedness phase. There must also be a plan to unite faculty, staff, and students with their family members and an emergency communication plan must be developed for keeping the campus community and media informed. Additionally, it is important to organize emergency management plans with state and local agencies and develop plans to train faculty, staff, and students on emergency preparedness. Collaboration with mental health professionals to develop a procedure for identifying and evaluating at-risk individuals is important in the preparedness phase. Finally, institutions must ensure compliance with the Family Educational Rights and Privacy Act and the Health Insurance Portability and Accountability Act (U.S. Department of Education, 2009).

### *Response*

Response is the third phase in emergency management. According to the U.S. Department of Education (2009), “Response is taking action to effectively contain and resolve an emergency” (p. 12). The more comprehensive the prevention-mitigation and preparedness phases, the more effective the response will be. The components of response include activating the emergency management plan; communicating with community partners and the campus community, including the media; and identifying the plan for response (U.S. Department of Education, 2009).

### *Recovery*

Recovery is the fourth phase in emergency management. “The Recovery phase establishes procedures, resources, and policies to assist an institution and its members’ return to functioning after an emergency” (U.S. Department of Education, 2009, p. 14). Recovery time will vary depending on the emergency situation and is considered an ongoing process. Institutions start planning for the recovery phase during the preparedness phase, and it is essential for the leadership team to be involved. The components of recovery include recovery of the physical and structural components, recovery of the business operations, re-establishment of the academic environment, and assistance with individual psychological/emotional needs (U.S. Department of Education, 2009). Since institutions will be learning during this phase, recovery should also include mitigation as part of its process (FEMA, 1996).

The focus of this research study is on the preparedness phase of emergency management. Two of the most important components of preparedness include developing and regularly reviewing an all-hazards emergency management plan and engaging faculty and staff in training exercises based on the emergency management plan.

After the tragedy at Virginia Tech, many states conducted a comprehensive review of their emergency management procedures. The findings were consistent across most of these reports. Institutions need to: (a) create and maintain up-to-date and comprehensive emergency management plans, (b) conduct training on emergency management plans with the campus community on a regular basis, (c) provide guidance and clarification on FERPA, (d) implement notification systems for campus emergencies, (e) create threat assessment teams, and (f) increase access to mental health services



(Florida Gubernatorial Task Force for University Campus Safety, 2007; Illinois Campus Security Task Force, 2008; Missouri Campus Security Task Force, 2007; National Association of Attorneys General Task Force on School and Campus Safety, 2007; New Mexico Governor's Task Force on Campus Safety, 2007; North Carolina Campus Safety Task Force, 2008; Oklahoma's Campus Life and Safety and Security Task Force, 2008; O'Neill, Fox, Depue, & Englander, Massachusetts Higher Education, 2008; Pennsylvania State Police Risk and Vulnerability Assessment Team, 2007; State of Wisconsin Governor's Task Force on Campus Safety, 2007; Task Force on Ohio College Campus Safety and Security, 2007). While all of the findings are important for institutions of higher education, the focus of this study was on emergency management planning, training, and FERPA regulations. However, it is important to understand how colleges and universities have increased their efforts to prevent campus violence as a result of the Virginia Tech tragedy.

#### Threat Assessment Teams

As noted above, many states have recommended that their institutions create threat assessment teams. These teams are designed as a prevention tool to identify troubled and potentially dangerous students and/or employees (Cornell, 2010). Teams are referred to by various names, including Threat Assessment Team (TAT); Behavioral Intervention Team (BIT); Behavioral Assessment Team (BAT); Students of Concern (SOC); Campus Assessment, Response, Evaluation (CARE); College Concerns Team (CCT); Threat Assessment and Behavioral Intervention (TABI); and Campus Assessment Team (CAT) (Sokolow and Lewis, n.d.). For the purposes of this research, the teams will be referred to as threat assessment teams.

The team should consist of representatives from the following areas: administrators, law enforcement/campus safety, mental health/counseling, faculty, student services, legal counsel, housing, and human resources. The team should have power to investigate disruptive or threatening behaviors and act accordingly. Additionally, team members must have a good working relationship and establish trust among one another (Cornell, 2010; Florida Gubernatorial Task Force for University Campus Safety, 2007; Fox and Savage, 2009; Illinois Campus Security Task Force, 2008; Missouri Campus Security Task Force, 2007; O'Neill, Fox, Depue, & Englander, Massachusetts Higher Education, 2008).

As a result of the Cho shootings, the state legislature in Virginia mandated all public higher education institutions implement a threat assessment team. Cornell (2010) indicated "The history of many school shootings reveals that the attack was preceded by threatening statements and behavior that aroused the concern of others weeks or months in advance" (p. 10). Threat assessment specifically focuses on individuals who have exhibited behavior of concern or expressed threatening remarks. The goal of the threat assessment team is to determine if the threat is serious and the individual poses a risk to the campus community (Cornell, 2010). There are four steps in threat assessment used by the higher education institutions in Virginia as Figure 1 illustrates.



Figure 1. Virginia Threat Assessment Decision-Tree.

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From "Threat Assessment in College Settings," by D. Cornell, 2010, *Change* 42(1), p. 12. Reprinted with permission of the author.

First, the teams need to identify a threat. This step involves educating the campus community to communicate any behavioral concerns or threatening remarks that are known to the threat assessment team. This was identified as one of the main weaknesses at Virginia Tech. Many individuals across campus had concerns about Seung Hui Cho; however, the concerns were not shared with one central team that could have identified the risk that Mr. Cho posed (Cornell, 2010). *Campus Violence Prevention and Response: Best Practices for Massachusetts Higher Education* (2008) identified the necessity of faculty members to report any students who exhibit disturbing or concerning behaviors through their writings and drawings. The Campus Safety Task Force in Wisconsin (2007) stressed the importance of reporting repeated classroom incidents of disruptive behavior, threats, stalking, and harassment to the threat assessment team. Additionally, the Florida Gubernatorial Task Force for University Campus Safety (2007) stated the importance of

educating faculty, staff, and students on identifying the various warning signs and submitting referrals to the threat assessment team.

The second step involves research and focuses on evaluating how serious the threat is. The threat assessment team may use the continuum in Figure 2 to identify the level of threat that an individual poses. At one end of the spectrum, an individual may have made a statement in jest that was never intended to hurt anyone. On the other hand, someone could have communicated their desire to seriously harm individuals. If no concerns are found in this step, the issue may be resolved (Cornell, 2010).



*Figure 2. Continuum of Threats.*

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From "Threat Assessment in College Settings," by D. Cornell, 2010, *Change* 42(1), p. 13. Reprinted with permission of the author.

The Virginia Tech Review Panel (2007) stated "It is essential that this [Threat Assessment] Team be charged with building a complete fact-based picture of any individual who is considered a risk to him or herself or to the campus community"

(p. 15). Discussion must occur with various individuals who know the person of concern. The State of Wisconsin Governor's Task Force on Campus Safety (2007) recommended speaking with individuals who are close to the person of concern, such as faculty, roommates, or housing employees, to evaluate the threat. Individuals may shed light on the student's behavior or other concerns. Teams must be careful to review the context in which the threats or disturbing behavior occurred. It is important to consider all details before determining the seriousness of the threat. While behavior may be disturbing, it may prove harmless (Fox and Savage, 2009).

Once the team has determined the seriousness of the threat, they may intervene to reduce the likelihood that violence will occur. This may involve notifying potential victims, recommending counseling for the person of concern, or in severe cases, legal action may need to be taken against the person of concern, such as a restraining order (Cornell, 2010). The Virginia Tech Review Panel expressed the importance of the threat assessment team to "recommend significant and timely interventions to ensure the safety of the individual and others in the campus community" (2007, pp. 15-16). The State of Illinois Campus Security Task Force (2008) identified the importance of the team's ability to provide or refer the student to the appropriate resources in a timely manner. Most individuals are experiencing mental health issues prior to their incidents of campus violence, including the potential for suicide (Deisinger, 2009).

Finally, it is essential that the threat assessment team continually reviews and monitors each situation to ensure that all parties are safe. This step may involve keeping a record of the case and asking the individuals involved to contact the team if any concerns arise. If the situation involved a threat or concern between two or more individuals, the

team may want to periodically follow up with all parties involved in the case to ensure safety. For the most serious matters, a case should remain open and be continually reviewed to identify any concerns. Records should be maintained even after a student graduates in the event another incident occurs (Cornell, 2010). For example, Peter Odighizuwa was a former student at Appalachian School of Law, and Stephen Kazmierczak formerly attended Northern Illinois University prior to their incidents of campus violence at these institutions (CNN, 2002; Friedman, 2008).

The following statements by Peter Lake summarize the importance of implementing threat assessment teams at all colleges and universities and educating the campus community to report students who exhibit disturbing or threatening behavior.

Most important, dangerous people rarely show all of their symptoms to just one department or group on campus. A professor may see a problem in an essay, the campus police may endure belligerent statements, a resident assistant may notice the student is a loner, the counseling center may notice that the student fails to appear for a follow-up visit. Acting independently, no department is likely to solve the problem. In short, colleges must recognize that managing an educational environment is a team effort, calling for collaboration and multilateral solutions.

(2007, p. 5)

#### All-Hazards Emergency Management Plan

While this research study focuses specifically on campus violence, it is important for colleges and universities to consider taking an “all-hazards approach” to planning. According to the U.S. Department of Education (2009), “All-hazards planning develops capacities and capabilities that are critical to prepare for a full spectrum of emergencies

or disasters, including natural hazards and severe weather, biological hazards, and violence and terrorism” (p. 4). As a result of the variety of tragedies that have occurred at colleges and universities across the country, from crimes of the type listed above, to hurricane destruction, to tornados and flooding, an all-hazards approach has become standard (Illinois Campus Security Task Force, 2008; Missouri Campus Safety Task Force, 2007; O’Neill, et al., Massachusetts Higher Education, 2008; Pennsylvania State Police Risk and Vulnerability Assessment Team, 2007). Jack Watring, chief of police at the University of Missouri-Columbia, supported the all-hazards approach when he stated, “We need to know what to do if there’s an active shooter, a natural disaster, a fire, an evacuation, tornados or floods; we need to know how to handle it” (Kennedy, 2008, p. 13).

Many scholars have emphasized the importance of institutional preparedness through development of a comprehensive emergency management plan. Rollo and Zdziarski (2007) identified the emergency management plan as “perhaps the single most important crisis management tool a campus can have” (p. 74). The plan is the foundation that an institution of higher education will use to perform its operations. A written plan provides clear and consistent guidelines regarding how an institution will respond to an emergency and aids in avoiding confusion during the response (Rollo and Zdziarski, 2007).

In a review conducted in Massachusetts to identify best practices across the United States for dealing with crisis situations, higher education officials reviewed 20 reports from task forces and study groups. The number one recommendation resulting from this review was to develop an all-hazards emergency management plan (O’Neill,

et al., Massachusetts Higher Education, 2008). An emergency management plan should be in place prior to an incident of campus violence. As stated in the U.S. Department of Education's *Practical Information on Crisis Planning* (2007), "A crisis is the time *to follow the crisis plan*, not to make a plan from scratch" (p. 4-1).

While having a comprehensive emergency management plan is important, it is even more critical to ensure that the plan meets the needs of the institution and is up-to-date. Kennedy (2007) noted, "The Virginia Tech massacre demonstrates the difference between having a plan and having the right plan" (p. 12). The Virginia Tech Review Panel (2007) found that Virginia Tech's emergency management plan was lacking in a variety of areas. One of the biggest deficiencies was that the plan did not include information related to shootings. The plan was also approximately two years old at the time of the Seung Hui Cho shootings and had not been updated during that period.

Another important component of an emergency management plan is to ensure that the plan is reviewed on a regular basis. Zdziarski (2006) stated, "Simply having a written plan and crisis protocols is not enough; to be well prepared, you should review and update them regularly....Best practices suggest an annual review" (p. 20). A review of the literature indicates that prior to the Virginia Tech incident, many institutions had not reviewed their emergency management plans with this frequency. Zdziarski (2001) found in his dissertation study that of the higher education institutions that reported having university crisis management plans, 56% indicated that their university plans were reviewed on an annual basis, 24% reported reviewing their plans every three years, 4% indicated a review of their plans occurred every five years, and 16% responded "other." Campus security incidents following Zdziarski's 2001 study appear to have prompted



more frequent review. The National Campus Safety and Security Project Survey (2008) found that 89% of participants reported that their emergency management plans were updated annually or continually revised as necessary, and 7% of participants advised that their plans were revised on a two to three year cycle. The Florida Gubernatorial Task Force for University Campus Safety (2007) recommended that emergency management plans at colleges and universities be reviewed on a quarterly basis accelerating the cycle. The Virginia Tech Review Panel (2007) indicated that most colleges and universities have reviewed their emergency management plans since the tragedy at Virginia Tech.

An all-hazards emergency management plan that is comprehensive, current, and relevant is essential for institutions of higher education. Regular review of the emergency management plan is also necessary to ensure accurate information but must be accompanied by good training.

### Training

The literature published by agencies responsible for promoting and encouraging campus safety stresses the importance of training exercises if a campus is to be appropriately prepared (International Association of Campus Law Enforcement Administrators, 2008; National Association of Attorneys General Task Force on School and Campus Safety, 2007; U.S. Department of Education, 2009; Virginia Tech Review Panel, 2007). The U.S. Department of Education (2007) indicated that training is essential in order to successfully implement an emergency management plan. Faculty and staff need to understand their responsibilities and expectations during a campus emergency if they are to respond appropriately (Zdziarski, 2006). Training also provides

the opportunity to identify concerns with the emergency management plan. According to the U.S. Department of Education (2009):

The more the plan is practiced and people are trained on the plan, the better the campus responds to emergencies in a comprehensive and effective manner....Exercises are an effective way to identify gaps and weaknesses in the plan and to train students, staff, faculty, and campus administrators in the emergency management procedures. (p. 51)

In addition, it is important to engage participants in training exercises so that each respondent has actively practiced the actions to be taken. Wilson (2007) stated that “Training is best when it is active and engaging, not lecture-based. Participants should be extensively involved – thinking, talking, practicing, revising, and evaluating” (p. 189). There are a variety of exercises that institutions of higher education may conduct, including orientation meetings, tabletop exercises, drills, functional exercises, and full-scale exercises. Practicing and training with community partners is highly recommended (U.S. Department of Education, 2009).

Orientation meetings provide the opportunity to discuss the emergency management plan with the campus community. Tabletop exercises allow individuals to discuss a scenario and how the institution would prepare for the emergency, respond to the emergency, and recover from the emergency (U.S. Department of Education, 2009). These exercises are inexpensive and provide the opportunity for hypothetical emergency situations in a less stressful environment (Wilson, 2007). The scenarios presented to participants in this research study are similar to what might be used in a tabletop exercise.

Drills include a limited number of campus staff and community partners working together to respond to a scenario. Functional exercises are comparable to drills but involve numerous campus staff and community partners. Individuals respond to a simulated event using the emergency management plan and procedures. Full-scale exercises are very time-consuming and involve multiple agencies and jurisdictions. These exercises use all available resources and examine the collaboration among all individuals and systems (U.S. Department of Education, 2009). Full-scale exercises may also be referred to as simulation exercises. These exercises require much coordination and planning between agencies but provide the opportunity for a realistic version of what may occur during an emergency and allow an institution to see if its emergency management plan works effectively (Zdziarski, 2006).

The need to perform training exercises and educate the campus community has grown in importance as a result of the tragedies that have occurred. In a follow up research study to Zdziarski's 2001 dissertation, Catullo (2008) found a significant change in training exercises performed. While 16.4% of institutions reported the use of tabletop exercises in 2001, 59.2% of institutions reported their use in 2007. In addition, while 26% of institutions reported the use of crisis simulations or drills in 2001, 50.7% reported their use in 2007.

As with updating of the emergency management plan, training must occur on a regular basis. The Virginia Tech tragedy has impacted the frequency with which training exercises are performed. More tabletop exercises, using the Virginia Tech scenario, are now being performed (Kennedy, 2008). The New Mexico Governor's Task Force on Campus Safety (2007) recommended that exercises occur at least on an annual basis, with

full-scale exercises occurring at least every three years. The Virginia Tech Presidential Internal Review (2007) advised that much time and attention had been devoted to training the campus community regarding campus violence at Virginia Tech but may not have been recent enough to seem relevant. “Because individuals tend to process information that they judge to be relevant to them, they may ignore policy and procedures related to campus violence until they need them, which is often too late” (p. 19).

A common concern with emergency preparedness is employee turnover. Ensuring that all faculty and staff are trained can be difficult since new faculty and staff are employed each year (Missouri Campus Security Task Force, 2007; Virginia Tech Presidential Internal Review, 2007). Oklahoma’s Campus Life and Safety and Security Task Force (2008) suggested that training be required for all new faculty and staff, and that training should be provided on a regular basis as a refresher for all employees.

Institutions need to determine which type(s) of training exercises will be most effective for their employees. The U.S. Department of Education (2009) indicated the following in relation to training exercises:

Before making a decision about which type of exercise to facilitate, a higher education institution should consider varying factors, including the amount of time and resources and collaborative support required to execute the activity balanced against the outcome of the experience. For example, while a tabletop exercise may be cheaper and less time-consuming to run, a full-scale exercise provides a more realistic context for the simulated response to an emergency situation, thus providing more constructive feedback to implement into plans.

(p. 52)

Due to the importance of being prepared for campus violence, some states feel that emergency preparedness should be tied to accreditation and state funding. The Florida Gubernatorial Task Force for University Campus Safety (2007) recommended that campus safety be tied to the accreditation process. The National Association of Attorneys General Task Force on School and Campus Safety (2007) recommended that states should think about mandating that all colleges and universities participate in training exercises at least annually as a requirement to receive state funding.

Northern Illinois University's (NIU) response to its campus shooting in 2008 demonstrated that well prepared campuses respond better to campus emergencies. In many ways, NIU was much better prepared to respond to the campus shooting incident than Virginia Tech. For example, NIU had an up-to-date and comprehensive emergency management plan in place, along with regular training. NIU did not wait until the Virginia Tech tragedy to create its emergency management plan; NIU began preparing its campus in 2001. A report on the NIU shooting indicated, "These efforts proved critical and life saving in the effective response and follow-up surrounding the February 14 shooting" (Northern Illinois University, 2008, p. xvi). On the other hand, Virginia Tech had an emergency management plan that was about two years old and did not include response to a campus shooting incident. Faculty, staff, and students had not been trained on this type of incident and were not familiar with the protocol for responding on April 16, 2007 (Northern Illinois University, 2008; Virginia Tech Review Panel, 2007).

Additionally, NIU had in place a threat assessment team to discuss any potential concerns that may arise on campus. However, NIU had no reason to suspect that Stephen Kazmierczak had mental health issues. In contrast, Virginia Tech did not have a threat

assessment team in place at the time of its tragedy. Virginia Tech had a “Care Team” which was not effective in addressing the multiple issues that had occurred with Cho, both inside and outside of the classroom. The campus community did not share information with one another or Cho’s parents and expressed concern that they did not believe they could share information under FERPA. In the NIU incident, the university immediately locked down the campus when it learned of the shooting and provided updates to the campus community. However, Virginia Tech did not notify its campus in a timely manner that a campus emergency had occurred and did not lock down the campus (Northern Illinois University, 2008; Virginia Tech Review Panel, 2007).

Under the current state of readiness in the United States, we do not know the level of preparedness from one campus to another. Individual states do not know if the higher education institutions are ready to respond. The purpose of this study was to determine how well prepared employees are to respond to campus safety incidents, based on evidence that there is still little indication that employees understand emergency management plans and can respond appropriately to campus violence.

#### Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) deals specifically with the privacy of education records at secondary and post-secondary institutions that receive U.S. Department of Education funds and has important implications for crisis management. Student education records are records that are “directly related to a student” and maintained by an institution (Hicks, Baker, Hawkey, Myers, & Weese, 2006, p. viii). FERPA grants four specific rights to students regarding their education records: the right to inspect their records, the right to request amendment to their records, the right to

consent to disclosure of their records, and the right to make a complaint with the U.S. Department of Education if they suspect these other provisions are violated (Hicks, et al., 2006).

FERPA became a significant issue in the Virginia Tech tragedy because a variety of incidents occurred that could have been reported regarding Seung Hui Cho's behavior prior to the fatal shootings. For example, a number of Cho's professors and staff from Residence Life observed questionable conduct by Cho. Under FERPA, professors and staff had the authority to contact Cho's parents, but they were not clear about this right. When behavior of this type is observed, college employees are often hesitant to make these contacts, however, since they understand FERPA to prohibit discussion with parents about student activity. The Virginia Tech Review Panel (2007) indicated the following:

Nothing in FERPA prohibits a school official from sharing with parents information that is based on that official's personal knowledge or observation and that is not based on information contained in an education record. Therefore, FERPA would not prohibit a teacher or other school official from letting a parent know of their concern about their son or daughter that is based on their personal knowledge or observation. (p. H-7)

It was also the case that when the police department at Virginia Tech received complaints regarding Cho's behavior, FERPA did not prohibit them from releasing this information to Cho's parents (Virginia Tech Review Panel, 2007). Records that are made and maintained for law enforcement purposes only are not subject to FERPA (Hicks, et al., 2006).

The Virginia Tech Review Panel (2007) stated “Information privacy laws are intended to strike a balance between protecting privacy and allowing information sharing that is necessary or desirable. Because of this difficult balance, the laws are often complex and hard to understand” (p. 63). The Review Panel expressed concern about the lack of understanding of FERPA and the inconsistent practice when applying privacy laws. The Review Panel proposed that amendments be made to FERPA, specifically related to the emergency exception, and recommended that the Department of Education provide additional flexibility in the emergency exception of FERPA.

Effective January 8, 2009, the Department of Education implemented updated FERPA regulations. One of the updates included the emergency exception to FERPA, which states:

An educational agency or institution may disclose personally identifiable information from an education record to appropriate parties, including parents of an eligible student, in connection with an emergency if knowledge of the information is necessary to protect the health or safety of the student or other individuals....An educational agency or institution may take into account the totality of the circumstances pertaining to a threat to the health or safety of a student or other individuals. If the educational agency or institution determines that there is an articulable and significant threat to the health or safety of a student or other individuals, it may disclose information from education records to any person whose knowledge of the information is necessary to protect the health or safety of the student or other individuals. If, based on the information available at



the time of the determination, there is a rational basis for the determination, the Department will not substitute its judgment for that of the educational agency or institution in evaluating the circumstances and making its determination.

(FERPA, 2008, p. 74854)

FERPA, as a subject, can be very disconcerting to faculty and staff at institutions of higher education. While there is more definitive language as to when an institution may release confidential student information, the views are still subjective. However, in the wake of Virginia Tech and other campus tragedies, employees must use their discretion to protect the campus community. One of the purposes of this study was to determine how well informed college employees are of their rights under FERPA and of the flexibility the law provides in situations that may lead to a campus emergency.

#### Clery Act

The Clery Act is a federal law that mandates colleges and universities to provide information on campus crimes and security policies annually. Formerly known as the Crime Awareness and Campus Security Act of 1990, this law was established in memory of Jeanne Ann Clery who was raped and murdered in her college dormitory in 1986. All higher education institutions who receive federal financial aid must comply with this law. The Clery Act requires colleges and universities to perform the following: (a) annually disclose a report that includes the past three years of campus crime statistics and policies on campus security; (b) publish institutional crime statistics for seven categories of crime, including homicide, sex offenses, robbery, aggravated assault, burglary, vehicle theft, and arson; (c) issue “timely warnings” when a serious threat is posed to students and

employees; and (d) produce a crime log available for public review (Security on Campus, Inc., 2008).

After the nation's worst mass shootings in April of 2007, there was much debate about Virginia Tech's failure to notify the campus community in a timely manner that a gunman was on campus. A warning was issued two hours after the first shootings occurred at Virginia Tech. Administrators claimed that they believed a domestic incident had occurred and that the campus community was not at risk (Potter, 2010). However, the U.S. Department of Education stated, "Virginia Tech's failure to issue timely warnings about the serious and ongoing threat deprived its students and employees of vital, time-sensitive information and denied them the opportunity to take adequate steps to provide for their own safety" (Potter, 2010, p. 1). Virginia Tech was fined the maximum penalty of \$55,000 for its negligence, including \$27,500 for failure to notify the campus in a timely manner and \$27,500 for not following the policy on timely warnings (Anderson and Shapira, 2011).

As a result of the Virginia Tech tragedy, the Higher Education Opportunity Act amended the Clery Act in 2008 by adding a statement on emergency procedures. When publicly disclosing security policies, an institution will "immediately notify the campus community upon the confirmation of a significant emergency or dangerous situation involving an immediate threat to the health or safety of students or staff" (Security on Campus, Inc., 2008, p. 1).

The Clery Act has been in existence for over 20 years. Higher education institutions are increasingly being held accountable for their response to campus safety

incidents and have been publicly scrutinized for failure to maintain compliance with the provisions of the Clery Act.

### Summary

The literature reports the growing number of campus violence incidents that have occurred at colleges and universities across the United States over the past 50 years. It stresses how unprepared Virginia Tech was to respond to the nation's worst mass shootings in 2007. The literature also illustrates that though much has been written about emergency management plans and how often they are reviewed, we know little about how well they are understood or could be followed at colleges and universities. Additionally, the literature stresses the importance of understanding FERPA but does little to indicate how well employees are educated in its nuances.

This chapter provided an overview of the literature that is pertinent to campus violence, emergency preparedness, and this research study. The relevant topics included a brief history of campus violence incidents in the United States, four phases of emergency management, threat assessment teams, all-hazards emergency management planning, training, the Family Educational Rights and Privacy Act, and the Clery Act. The following chapter provides details on the methodology that was used for this research study.

## CHAPTER 3: METHODOLOGY

### Introduction

The purpose of this research study was to determine the relationship between active faculty/staff participation in training exercises as part of implementation of an all-hazards emergency management plan and the consistency and accuracy of response to potential campus safety incidents in higher education. This study also examined the relationship between implementation of an all-hazards emergency management plan and knowledge of FERPA regulations when responding to potential campus safety incidents.

### Participants

The participants in this research were selected from public two-year and four-year colleges and universities in Missouri, which includes 21 public two-year institutions and 13 public four-year institutions. Of the 21 public two-year institutions located in the state, 17 institutions participated. One community college was used for the pilot study, and three two-year institutions declined to participate. Of the 13 public four-year colleges and universities located in Missouri, 12 institutions participated, and one four-year institution declined to participate in the study.

Participants within the institutions were selected using purposive sampling and stratified random sampling. According to Berg (2007), “When developing a purposive sample, researchers use their special knowledge or expertise about some group to select subjects who represent this population” (p. 44). The researcher selected participants who should be directly involved and have knowledge of their institution’s all-hazards emergency management plan. Participants included the following from each college or university, assuming the institution has the position: president, chief academic officer,

dean of student services/student affairs, registrar, faculty members, public safety director/chief of police, public safety officer, health/mental health professional, human resource director, housing director, and emergency preparedness contact person. The researcher reviewed each institution's web site to identify the names and e-mail addresses of the selected positions. If the contact for the position could not be obtained from the college's web site, the researcher communicated with the institution to determine the appropriate contact person for the position.

Since faculty members represent the largest number of personnel employed at a college or university, the researcher used stratified random sampling to select 20 full-time faculty members to complete the survey at each college. Hinkle, et al. (2003) noted that "When stratified random sampling is used, the researcher not only defines the strata but also determines how many members of each stratum to include in the sample" (p. 145). For this study, the researcher reviewed the various departments on each institution's web site to ensure that representation from each was included. The number of full-time faculty at two colleges was less than 20, and all of these individuals were invited to participate.

The goal of this research study was to obtain at least a 30% response rate from the public two-year and four-year institutions. This goal was met with 29 institutions participating, including 17 two-year and 12 four-year institutions, for an 85% participation rate by institutions. A secondary goal was to obtain responses from at least 30% of each type of classification. Overall, 75% of the administrators, 27% of the faculty, and 16% of the staff members who were invited to participate completed the survey.

This study was endorsed by the Higher Education Subcommittee of the Homeland Security Advisory Council in Missouri and a request from the Commissioner of Higher Education was included with the distribution of the survey and undoubtedly assisted with response rates, particularly by administrators. The goal was to encourage a higher response rate than might be expected without this endorsement and request.

### Instrument

A web-based survey designed by the researcher was used in this study (see Appendix A) and was administered using Flashlight, an online surveying tool. The survey included two campus emergency scenarios, each followed by a series of statements related to personal and institutional responsibility as they related to the crisis. After the second scenario was presented, the survey included statements regarding federal regulations, specifically related to the Family Educational Rights and Privacy Act (FERPA). Participants were also asked to respond to general statements regarding personal and institutional practices related to all-hazards emergency management planning and training but were asked to respond to the survey without referencing their institution's emergency management plan. The study utilized a five-point Likert scale, with responses ranging from strongly agree to strongly disagree. Demographic information related to each participant was also collected. The survey took approximately 10 minutes for participants to complete.

The first scenario that was presented to participants involved a college student who brought a weapon to campus. Participants were presented with the following information: "Dave, a student, brings a gun to school and is seen with the weapon on campus. As Brian, another student, is telling you that Dave has a gun, you hear what

sounds like shots fired in an adjoining hallway in your building.” A set of statements concerning each participant’s personal role/responsibility was presented. For example, participants responded to each response listed in Table 1 using the five-point Likert scale with Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD): “As soon as I hear shots fired, I would:”

Table 1

*Personal Responsibility Statements to Which Participants Were Asked to Respond*

Statement	Response				
Leave my office/classroom to see what was happening	SA	A	N	D	SD
Lock my office/classroom door	SA	A	N	D	SD
Call the Director of Public Safety/Chief of Police	SA	A	N	D	SD
Call 911	SA	A	N	D	SD
Alert the campus community that there is an armed person on campus	SA	A	N	D	SD
Do nothing	SA	A	N	D	SD

Participants were also asked to respond to statements concerning institutional responsibility. For example, “When my institution is aware that there is a gunman on campus, my institution is responsible for:”

Table 2

*Institutional Responsibility Statements to Which Participants Were Asked to Respond*

Statement	Response				
Notifying the campus community	SA	A	N	D	SD
Calling 911	SA	A	N	D	SD
Locking down the campus	SA	A	N	D	SD
Maintaining regular communication with the campus community	SA	A	N	D	SD

After the first set of statements had been answered, participants were presented with a second scenario in which the situation had intensified. Participants read the following statements: “Situation escalates. Dave takes a classroom of students and their instructor hostage.”

Participants were asked to respond to additional statements concerning personal and institutional responsibility and to statements concerning federal regulations using the five-point Likert scale. The Family Educational Rights and Privacy Act (FERPA) was the focus of these statements, with a sample including the following: “FERPA allows me to release information regarding Dave’s behavior to his parents.”

Participants were also asked to respond to a series of general statements concerning their institution’s all-hazards emergency management plan and training protocol using the five-point Likert scale. An example of these statements included “I participate in training and/or drills related to campus violence (e.g., active shooter and/or



hostage situation) at least annually as part of my institution's emergency management plan.”

The survey also asked participants to respond to various demographic questions, such as position, classification of position, status as emergency management coordinator at his/her institution, employment at a two-year or four-year institution, name of institution, number of years in current position, number of years in profession, highest degree earned, gender, and age.

### *Reliability*

Reliability is an essential component of any research study. As stated by Groves, et al. (2004), “‘Reliability’ is a measure of variability of answers over repeated conceptual trials. Reliability addresses the question of whether respondents are consistent or stable in their answers” (p. 261). In order to ensure reliability of the survey designed by the researcher, a field test was performed with various higher education personnel on the researcher's campus following receipt of Institutional Review Board (IRB) approval from the University of Missouri-St. Louis and from the researcher's own campus. Thirty-one individuals were invited to participate, and 17 responses were received, for a 55% response rate. Twelve faculty, four staff, and one administrator participated in the pilot study. Feedback was received about the time required to complete the survey.

Additionally, Cronbach's alpha was used to identify the internal consistency of the survey instrument. When considering all of the personal responsibility and institutional responsibility questions pertaining to both scenarios, Cronbach's alpha was .702. The removal of two of the personal responsibility questions in the second scenario increased the internal reliability of the survey to .765. For the questions related to FERPA,

Cronbach's alpha was .828; therefore, no changes were made to this portion of the survey instrument.

### *Validity*

The validity of the researcher's web-based survey was also evaluated. According to Groves, et al. (2004), validity is "the extent to which the survey measure accurately reflects the intended construct" (p. 254). The researcher presented the survey to members of the Higher Education Subcommittee of the Homeland Security Advisory Council in Missouri to field test the survey for content validity. Members of this subcommittee include professionals from higher education, law enforcement, homeland security, fire safety, campus public safety, mental health, health and senior services, and law. Additionally, students participate in this subcommittee. The individuals serving on this subcommittee were well qualified to provide input on the survey questionnaire. The researcher made minor adjustments to the survey instrument based on recommendations from the Higher Education Subcommittee.

### *Review of Emergency Management Plans*

One of the purposes of this research study was to determine the relationship between implementation of an all-hazards emergency management plan that includes faculty/staff participation in training exercises and the accuracy of response to potential campus safety incidents in higher education, as called for by the plan. The researcher reviewed each institution's web site to obtain the emergency management plan. If the researcher could not locate an institution's plan on their web site, the institution was contacted to request a copy of the campus violence section of their emergency

management plan. The researcher was able to obtain emergency management plans for 27 of the 29 participating institutions.

During the course of this review, it became evident that a variety of emergency management guidelines existed for both community colleges and four-year colleges and universities, including full-scale plans, brochures, quick reference guides, flip charts, and informational web pages. The documents ranged from one page to over 40 pages and were referred to by various names, including emergency management plans, emergency action plans, emergency operations plans, emergency response plans, emergency response guides, campus emergency preparedness guides, emergency procedures, and crisis management plans. For the purposes of this study, all documents will be referred to as emergency management plans.

In order to ensure accuracy of response, each institution's emergency management plan was reviewed to identify where the response to each survey question may be found in the plan. The researcher discovered that answers to the personal responsibility questions were mostly identified in the emergency management plans, but many of the documents did not include information that would tell an employee how to respond to the institutional responsibility questions. Therefore, the review focused exclusively on accurate responses to 16 of the personal responsibility questions.

The researcher used a survey template and circled the correct response to each personal responsibility question based on each institution's emergency management plan. If the researcher located the answer to a specific question, the appropriate response of strongly agree/agree or strongly disagree/disagree was selected for the question, based on the information in the plan. If the researcher could not find the answer to the question in

the emergency management plan, neutral was selected. The researcher then used intercoder reliability to confirm consistency in coding by asking another employee in higher education (a recent Ph.D. graduate) to review 50% of the plans and perform the same analysis. Different variations of emergency management documents were reviewed by the coder. After the coder reviewed the first two plans, she contacted the researcher to obtain clarification. Once the coder had reviewed the plans, they were returned to the researcher to compare responses. Then the researcher and the coder met to review any inconsistencies. There were only two questions in the active shooter scenario on which the researcher and coder had responded differently on some plans. These questions were “Call the Director of Public Safety/Chief of Police” and “Assist the injured person.” After discussing the reasoning for each of our selections, the researcher and the coder reached consensus on the appropriate response to the questions. The researcher also reviewed the other plans to ensure accuracy in response for these questions. Once the survey was conducted, the researcher compared the responses of each participant for the personal responsibility questions against the responses found in his/her institution’s emergency management plan to determine how accurately each participant’s responses matched the institution’s plan.

### Procedure

The researcher obtained approval from the Institutional Review Board (IRB) at the University of Missouri-St. Louis (UMSL), then contacted each public higher education institution in Missouri to determine how to obtain IRB approval at those institutions. Of the 33 public institutions that were targeted for this research study, seven required the researcher to go through their campus’ IRB application process. Seventeen

institutions permitted the researcher to provide a copy of UMSL's IRB approval as satisfying their requirements. One institution requested the IRB application submitted to UMSL. Two institutions engaged in dialogue with the researcher about her study but did not require any additional documentation. Additionally, six institutions advised that no permission was required to administer a survey of this variety on their campus. Seventeen institutions requested to see a copy of the researcher's survey, 10 institutions requested a dissertation abstract, four institutions requested a copy of the e-mail that would be sent to individuals asking them to participate in the research study, and two institutions requested a copy of the administrators, faculty, and staff at their institutions who would be asked to participate in this research study.

During the process of obtaining permission to conduct research at each institution, it was discovered that one institution preferred to initially contact the administrators, faculty, and staff prior to the researcher sending the survey, while other institutions volunteered to e-mail individuals and encourage participation. The researcher was more successful in obtaining responses from the institutions at which administrators, faculty, and staff were encouraged to participate.

A major goal was to ensure that participants understood the importance of this research study. The researcher consulted with Missouri's Commissioner of Higher Education and the Higher Education Subcommittee of the Homeland Security Advisory Council on this project, and the Commissioner agreed to write a letter of support for this study on behalf of the Higher Education Subcommittee (see Appendix B). This letter was provided as a link in the e-mail that was sent to each administrator, faculty, or staff member asking for his/her participation in this research study. Additionally, the president

of the researcher's institution sent an e-mail to his colleagues asking for their institution's support and participation in this research study.

As noted above, each college or university's web site was reviewed to identify the e-mail address of each individual to be surveyed, with 20 full-time faculty members randomly selected by the researcher from each institution's web site. For the two institutions that employed less than 20 full-time faculty, all full-time faculty employed at these two institutions were included. If the researcher was unable to locate the desired position on an institution's web site or was uncertain as to who served in this capacity, the researcher contacted the institution to obtain this information.

While the researcher knew the identity of each participant, the participants remained anonymous throughout the research study. The researcher made contact with the participants at each institution through their college e-mail addresses, but e-mail addresses were not visible when e-mails were sent to participants to ensure confidentiality. E-mails requesting participation were sent to all participants at the same institution at the same time. In the initial e-mail contact (see Appendix C), the researcher explained the purpose and value of the study, included a link to the letter of support from the Commissioner of Higher Education, ensured that confidentiality would be maintained, explained the informed consent process, and requested participation. The researcher also provided a link to the web-based survey. The first phase of data collection yielded 125 responses, or 50%, of the survey responses.

After a 10-day time period, another e-mail was sent to participants who had not yet completed the web-based survey. The subject line indicated "Reminder: Campus Safety Survey." Another link to the web-based survey was included in the e-mail

message. The researcher received an additional 97 responses, or 37%, during this time period. After another 10-day time period, a final reminder e-mail with the subject line “Final Reminder: Campus Safety Survey” went to all participants who had not yet completed the web-based survey. This e-mail also included the link to the web-based survey. The final reminder resulted in another 29 responses, or 11%, of the total received.

### Design

A quantitative research design was employed in this research study. The dependent variables included the responses to each of the personal responsibility, institutional responsibility, and FERPA questions. These responses assisted in identifying the consistency of response to potential campus safety incidents, accuracy of response to potential campus safety incidents, and knowledge level of FERPA regulations. The independent variables included responses to the emergency management planning and training questions as well as various demographic factors, including position, classification of position, status as emergency management coordinator at his/her institution, employment at a two-year or four-year institution, name of institution, number of years in current position, number of years in profession, highest degree earned, gender, and age.

Data collected through the researcher’s web-based survey were analyzed using the Statistical Package for the Social Sciences (SPSS). The General Linear Model (GLM) – multivariate analysis with multiple criterion variables was used to analyze data. The GLM is “A general statistical model describing the linear relationship between one or more dependent variables and one or more independent variables” (Bryman and Cramer, 2011, p. 354). Multivariate analysis is “The analysis of the relationship(s) between more

than two variables” (Bryman and Cramer, 2011, p. 357). Multiple criterion variables in this case included the different dependent variables used in this study, including the responses to each of the personal responsibility, institutional responsibility, and FERPA questions. Multivariate analysis was used to identify what independent variables were significant in the presence of all dependent variables. Additionally, this statistical tool allowed the researcher to use between-subjects effects to determine if a relationship existed between the dependent variables and each of the significant independent variables.

Data was also analyzed using crosstabulations and case summaries. A crosstabulation, also referred to as a contingency table, is “A table comprising rows and columns that includes at least two variables and that expresses the association between variables. Contingency tables include frequencies, i.e. the number of cases for each intersection in the table” (Bryman and Cramer, 2011, p. 351). Crosstabulations were used to identify relationships between dependent variables and/or independent variables. For example, crosstabulations were used to determine consistency in response for all personal responsibility, institutional responsibility, and FERPA questions by institution and by classification. Crosstabulations also served to identify how institutions responded to various demographic and emergency management independent variables.

Case summaries, or a report that identifies responses to each dependent variable by specific independent variables, were also used to analyze data. For example, case summaries were used to identify the accuracy of response for all personal responsibility and FERPA questions by institution and by classification within institution.



### Limitations

This study was limited by several factors that are indicative of characteristics of both the nature of the study and the institutions involved. There were some institutions, such as community colleges, that did not have all participant positions. For example, 12 of the community colleges did not have housing, four of the community colleges did not have health/mental health professionals, and two did not have public safety departments on campus. Additionally, two of the two-year institutions are part of community college districts and have district coordinators for the Human Resources and Registrar departments. Two institutions also did not specifically identify an emergency preparedness contact person and utilized a group of individuals to serve in this capacity. In these cases, there were not comparable responses from each institution.

The researcher also received low response rates from one of the employee groups. Despite three e-mail requests for participation, only 16% of staff members who received the survey chose to participate. As will be discussed in Chapter 4, the low response rate from staff members limited the ability of the researcher to draw firm conclusions from the data, especially related to training.

The study was further limited by the fact that some institutions did not provide emergency management plans, and by the vast differences among plans in terms of completeness. This finding is important to the study because in some cases, it did limit the ability of the model to compare responses by participants to statements in their institutional plans.

## Summary

This chapter provided comprehensive information on the methodology that was used to collect and analyze data for this research study. A web-based survey designed by the researcher was administered using an online survey tool, and the reliability and validity of the survey were reviewed. Administrators, faculty, and staff at 29 public higher education institutions in Missouri were surveyed to identify their consistency and accuracy of response to potential campus safety incidents and their knowledge of FERPA regulations when responding to these incidents. Participants also responded to various demographic and emergency management planning and training questions to assist with identifying their level of emergency preparedness. Emergency management plans were also reviewed for 27 institutions to assist in determining accuracy of response to the survey questions. Multivariate analysis with multiple criterion variables, crosstabulations, and case summaries were used to analyze the data in SPSS. Chapter 4 includes the findings from this research.

## CHAPTER 4: RESULTS

### Introduction

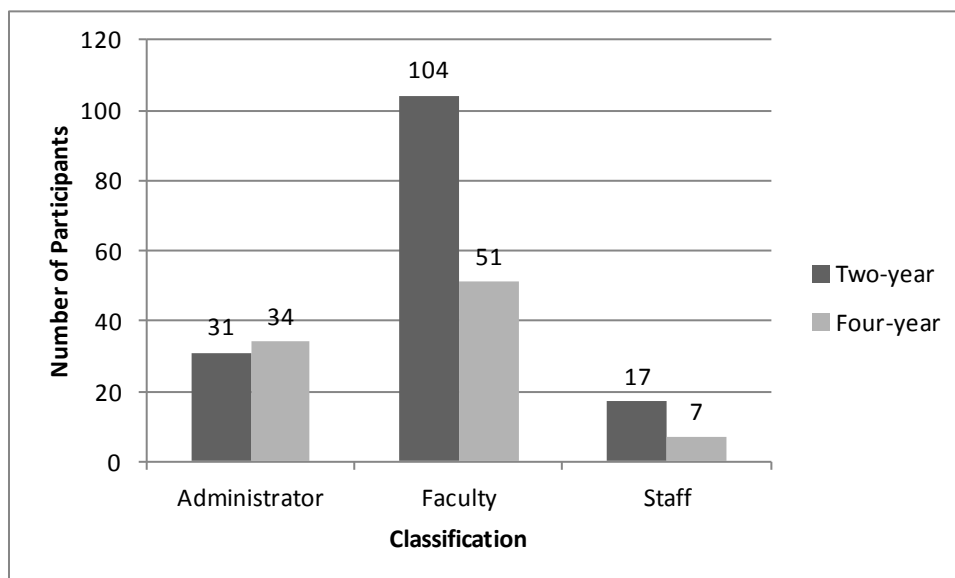
Chapter 4 focuses on describing the participants in this research study, reviews the survey instrument and the results obtained, and reports how the researcher dealt with missing data. The statistical tools that were used to analyze data are presented. The chapter also includes a discussion of emergency management planning and training at the participating institutions. Each of the six hypotheses is examined with a report on the findings of this research. Additionally, comments are shared that the researcher received from both participants and non-participants regarding her study.

### Participants

A total of 802 administrators, faculty, and staff from 29 public higher education institutions in Missouri were invited to participate in this research study. A total of 251, or 31%, completed the survey. Responses were received from 159 participants at community colleges and 92 individuals at four-year colleges and universities. Overall response rates from each institution ranged from a minimum of 14% to a maximum of 75% of those invited to participate. Six participant response sets were eliminated due to insufficient data, which was defined as responses missing more than 25% of the requested information. Therefore, the survey results are based on responses from 245 administrators, faculty, and staff.

Figure 3 identifies the number of administrators, faculty, and staff who participated in this research study by type of institution. Overall, 65 administrators, 155 faculty, and 24 staff responded (one individual did not report his/her classification). Of the 65 administrators, 31 represented community colleges and 34 were from four-year

colleges and universities. Of the 155 faculty, 104 represented community colleges and 51 were from four-year colleges and universities. Finally, of the 24 staff members who participated, 17 represented community colleges, while seven represented four-year colleges and universities.



*Figure 3.* Number of Participants by Classification and Type of Institution.

One hundred fourteen of the 245 participants were male, while 126 were female. Five participants did not identify their gender. The age of participants ranged from 26 to 77 with a mean age of 50. The number of years in the respondent's current position ranged from 0 to 52 with a mean of 10 years, while the number of years in the profession ranged from 0 to 52 with a mean of 21 years.

Eighteen respondents reported that they are the emergency management coordinators at their institutions, including 10 administrators, one faculty member, and seven staff members. Of these 18 emergency management coordinators, four did not provide their positions and the remaining 14 identified their positions as follows: Chief of Police (3 respondents), Dean of Student Affairs, Director, Director of Facilities, Director

of Health and Wellness Services, Director of Institutional Safety, Director of Safety, Director of Security, Director of Student Life and Development, Faculty (Environmental Health and Safety), Interim Provost, and Risk Manager. Respondents at two institutions reported more than one emergency management coordinator. Therefore, there were 14 cases in which a college or university did not have a response from a person identifying him or herself as the emergency management coordinator.

The response rate to the survey for administrators was better than expected, and the rate for faculty approached the desired 30% considered acceptable for statistical analysis. The percentage received from staff was disappointing, but with the declining response rate with each reminder to potential participants, it was determined that attempts to solicit further surveys would be fruitless. This disparity in response rates complicates some of the analysis as will be discussed later. A more significant issue, however, is that rates for groups varied by institution, making it impossible to determine if training occurred evenly among employee groups, and therefore if training percentages represented the institution as a whole. For this reason, some of the findings must be viewed as inferences that suggest issues demanding further investigation, rather than as accurate representations of the institutions as a whole.

#### Instrument

The researcher designed a web-based survey that served as the primary data collection instrument for this study. The survey included an active shooter scenario and a hostage scenario for which participants were asked to respond to a series of personal responsibility, institutional responsibility, and FERPA questions. The survey also included questions related to emergency management planning and training at each

institution. A five-point Likert scale, with responses ranging from strongly agree to strongly disagree, was used for this survey. Additionally, demographic information was collected from each participant.

The researcher used Cronbach's alpha to identify the internal consistency of the survey instrument. When considering all of the personal responsibility, institutional responsibility, and FERPA questions pertaining to both scenarios, Cronbach's alpha was .765. The researcher also reviewed the internal consistency for the categories of dependent variables. For the personal responsibility questions, Cronbach's alpha was .668; for the institutional responsibility questions, Cronbach's alpha was .877; and for the FERPA questions, Cronbach's alpha was .777. The standard for an acceptable Cronbach's alpha result is .70 or above (Nunnally, 1978, as cited in Bryman and Cramer, 2011). Therefore, when considering all variables together, the internal consistency of the survey instrument was acceptable.

#### Adjusting For Missing Data

Responses from six participants were not used in data analysis because they were missing significant data, which was defined as not responding to 25% or more of the survey questions. For the other respondents who did not answer one or more questions in the personal responsibility, institutional responsibility, or FERPA categories, the following procedure was used to complete missing data. The researcher identified what she believed to be three of the most important demographic variables in the study, including classification (administrator, faculty, or staff), employment at a two-year or four-year institution, and gender. The researcher then reviewed the mean response to each question using the three demographic variables identified above. Any missing personal

responsibility, institutional responsibility, or FERPA responses were assigned the appropriate mean response based on the three demographic variables that matched the respondent. This served to keep the answers of these individuals with missing data “statistically neutral” for questions where no answer was provided.

### Descriptive Statistics

The means, standard deviations, and variances for the dependent variables in this research study vary considerably. When considering only the personal responsibility questions, the mean values ranged from 1.0795 (S1PR7) to 4.7914 (S2PR5), and standard deviations were as small as .29682 (S1PR7) to as large as 1.37176 (S1PR12). The variances ranged from .088 (S1PR7) to 1.882 (S1PR12). There was much consensus about the statement pertaining to the active shooter scenario that indicated “Do nothing” (S1PR7). Ninety-three percent of participants responded that they strongly disagreed with this statement. There was agreement about “Be observant of my surroundings” (S2PR5) for the hostage scenario. Eighty-two percent of respondents indicated that they strongly agreed that this was important. However, there was not consensus about whether to “Alert the campus community that someone has been injured” (S1PR12). While 58% strongly agreed or agreed, 24% of participants strongly disagreed or disagreed, accounting for the larger standard deviation and variance in response.

For the institutional responsibility questions, the mean values ranged from 4.5598 (S1IR3) to 4.8490 (S2IR2), and standard deviations ranged from .45001 (S2IR2) to .80412 (S1IR3). The variances ranged from .203 (S1IR5 and S2IR2) to .647 (S1IR3). There was greater agreement on the institutional responsibility questions than the personal responsibility questions. For example, 88% of respondents strongly agreed that the institution should “Call 911” (S2IR2) when a hostage situation occurs. The standard

deviation and variance for this dependent variable were small. While 71% of participants strongly agreed that their institution is responsible for “Locking down the campus” (SIIR3) during an active shooter situation, the standard deviation and variance were somewhat larger as some individuals did not agree with this statement.

The mean values ranged from 2.2366 (F3) to 3.4653 (F2) when reviewing the three questions related to FERPA. The standard deviations were large but very close and ranged from 1.40105 (F2) to 1.51861 (F1), while the variances were large and ranged from 1.963 (F2) to 2.306 (F1). These results indicate that there was not consensus on the correct response to the FERPA questions. Participants responded at both ends of the spectrum for these questions.

#### General Linear Model – Multivariate Analysis

The General Linear Model (GLM) using multivariate analysis with multiple criterion variables was one of the statistical tools used to analyze the research data. The dependent variables are comprised of the questions from the active shooter and hostage scenarios, including the 18 questions concerning personal responsibility, the 12 questions regarding institutional responsibility, and the three FERPA questions.

The independent variables are comprised of various demographic data as well as data related to emergency management planning and training at each institution. The demographic variables included the following:

- Position
- Classification
- Emergency management coordinator
- Employment at a two-year or four-year institution
- Employment at which institution
- Number of years in current position
- Number of years in profession
- Highest degree earned



- Gender
- Age

The emergency management variables included the following:

- Implementation of emergency management plan at the respondent's institution
- Reading of institution's emergency management plan
- Plan addresses active shooter situation
- Plan addresses hostage situation
- Involvement in the development of the institution's emergency management plan
- Participation in training and/or drills related to campus violence at least annually
- Mandatory participation in training and/or drills for administrators
- Mandatory participation in training and/or drills for full-time faculty
- Mandatory participation in training and/or drills for part-time faculty
- Mandatory participation in training and/or drills for full-time staff
- Mandatory participation in training and/or drills for part-time staff
- Mandatory participation in training and/or drills for student workers

One of the advantages of using multivariate analysis with multiple criterion variables was that the probability of making a Type I error was reduced. Additionally, analyzing all of the dependent variables together provided a more “sensitive measure of the effects of the independent variables” (Bryman and Cramer, 2011, p. 263).

The multivariate analysis performed on the 33 dependent variables together found that only three independent variables were significant at the .05 level. These three are analyzed in detail in Table 3. Two of these are demographic variables, position as emergency management coordinator and number of years in profession. Serving as the emergency management coordinator at his/her institution was significant at .008. The second demographic variable, number of years in profession, was significant at .002. The third significant independent variable is an emergency management variable, participation in training and/or drills is mandatory for student workers, and was significant at .035.

Table 3

*Multivariate Tests*

	Effect	Value	F	Hypothesis df	Error df	Sig.
D3 – Emergency management coordinator	Pillai's Trace	.315	1.843 <sup>a*</sup>	33.000	132.000	.008
	Wilks' Lambda	.685	1.843 <sup>a*</sup>	33.000	132.000	.008
	Hotelling's Trace	.461	1.843 <sup>a*</sup>	33.000	132.000	.008
	Roy's Largest Root	.461	1.843 <sup>a*</sup>	33.000	132.000	.008
D7 – # of years in profession	Pillai's Trace	.341	2.072 <sup>a*</sup>	33.000	132.000	.002
	Wilks' Lambda	.659	2.072 <sup>a*</sup>	33.000	132.000	.002
	Hotelling's Trace	.518	2.072 <sup>a*</sup>	33.000	132.000	.002
	Roy's Largest Root	.518	2.072 <sup>a*</sup>	33.000	132.000	.002
E12 – Participation in training and/or drills is mandatory for student workers	Pillai's Trace	.285	1.591 <sup>a*</sup>	33.000	132.000	.035
	Wilks' Lambda	.715	1.591 <sup>a*</sup>	33.000	132.000	.035
	Hotelling's Trace	.398	1.591 <sup>a*</sup>	33.000	132.000	.035
	Roy's Largest Root	.398	1.591 <sup>a*</sup>	33.000	132.000	.035

Note. a = exact statistic

\* $p < .05$

When looking at the between-subject effects for the three significant independent variables, many relationships were identified. Table 4 identifies the 10 dependent variables that were significant with emergency management coordinator, the four dependent variables that were significant with the number of years in profession, and the five dependent variables that were significant with mandatory participation in training for student workers. One of the dependent variables, the FERPA question related to releasing information about Dave's behavior to students, was significant with all three independent variables. The other two FERPA questions about releasing information to Dave's parents and to colleagues were significant with emergency management coordinator and number of years in profession.

The personal responsibility question for the active shooter scenario, "Leave my office/classroom to see what was happening" and the personal responsibility question for the hostage scenario, "I feel well prepared" were significant with two of the independent variables, emergency management coordinator and mandatory participation in training for student workers. The personal responsibility question for the active shooter scenario, "Confront the gunman" was also significant with two of the independent variables, emergency management coordinator and number of years in profession.

Table 4

*Test of Between-Subjects Effects: Three Independent Variables*

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
D3 – Emergency management coordinator	S1PR2 – Leave my office/classroom to see what was happening	12.508	1	12.508	9.852*	.002

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
D3 – Emergency management coordinator	S1PR9 – Confront the gunman	15.154	1	15.154	23.187*	.000
	S1IR8 – Maintaining regular communication with the campus community	2.078	1	2.078	4.591*	.034
	S2PR1 – I feel well prepared	2.682	1	2.682	3.946*	.049
	S2PR2 – Confront Dave physically	16.440	1	16.440	17.701*	.000
	S2PR3 – Confront Dave verbally	5.860	1	5.860	5.578*	.019
	S2IR4 – Maintaining regular communication with the campus community	2.052	1	2.052	4.006*	.047
	F1 – Release information to Dave's parents	9.432	1	9.432	4.687*	.032

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
D3 – Emergency management coordinator	F2 – Release information to my colleagues	7.679	1	7.679	4.289*	.040
	F3 – Release information to students	31.912	1	31.912	18.003*	.000
D7 – Number of years in profession	S1PR9 – Confront the gunman	3.105	1	3.105	4.751*	.031
	F1 – Release information to Dave's parents	11.152	1	11.152	5.542*	.020
	F2 – Release information to my colleagues	16.422	1	16.422	9.172*	.003
	F3 – Release information to students	17.535	1	17.535	9.893*	.002
E12 – Participation in training and/or drills is mandatory for student workers	S1PR2 – Leave my office/classroom to see what was happening	6.719	1	6.719	5.292*	.023

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
E12 – Participation in training and/or drills is mandatory for student workers	S1PR5 – Call 911	2.005	1	2.005	3.910*	.050
	S1IR3 – Locking down the campus	3.169	1	3.169	5.750*	.018
	S2PR1 – I feel well prepared	3.924	1	3.924	5.773*	.017
	F3 – Release information to students	8.184	1	8.184	4.617*	.033

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*Note.* S1 = Scenario 1; S2 = Scenario 2; PR = personal responsibility questions; IR = institutional responsibility questions; F = FERPA questions.

\* $p < .05$

### *Emergency Management Coordinator*

When looking more closely at the relationship between the independent variable, emergency management coordinator, and all of the dependent variables, the researcher discovered that additional dependent variables were significant when multivariate analysis was performed using only this independent variable. Some dependent variables

were also no longer significant. This occurred because the number of independent variables being analyzed decreased to only one as opposed to all independent variables.

Table 5 presents the dependent variables that were significant in the presence of only the emergency management coordinator independent variable. Bold indicates a new significant dependent variable, black indicates a dependent variable that was previously identified as significant, and italics indicate a dependent variable that was no longer significant. All of the new significant variables were personal responsibility questions related to the active shooter and hostage scenarios. The variables that were no longer significant were institutional responsibility questions related to the active shooter and hostage scenarios.

Table 5

*Test of Between-Subjects Effects: Emergency Management Coordinator*

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
D3 – Emergency management coordinator	<b>S1PR1 – I feel well prepared</b>	<b>19.380</b>	<b>1</b>	<b>19.380</b>	<b>17.101*</b>	<b>.000</b>
	S1PR2 – Leave my office/classroom to see what was happening	20.060	1	20.060	15.431*	.000
	<b>S1PR6 – Alert the campus community that there is an armed person on campus</b>	<b>9.649</b>	<b>1</b>	<b>9.649</b>	<b>6.146*</b>	<b>.014</b>

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
D3 – Emergency management coordinator	S1PR9 – Confront the gunman	40.316	1	40.316	49.963*	.000
	<b>S1PR12 – Alert the campus community that someone has been injured</b>	<b>10.151</b>	<b>1</b>	<b>10.151</b>	<b>5.455*</b>	<b>.020</b>
	S2PR1 – I feel well prepared	29.962	1	29.962	22.356*	.000
	S2PR2 – Confront Dave physically	48.795	1	48.795	40.899*	.000
	S2PR3 – Confront Dave verbally	5.449	1	5.449	4.669*	.032
	<b>S2PR4 – Try to establish a rapport with Dave</b>	<b>4.828</b>	<b>1</b>	<b>4.828</b>	<b>4.183*</b>	<b>.042</b>
	F1 – Release information to Dave's parents	39.797	1	39.797	18.559*	.000
	F2 – Release information to my colleagues	21.017	1	21.017	11.092*	.001
	F3 – Release information to students	47.542	1	47.542	26.325*	.000



Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
D3 – Emergency management coordinator	<i>S1IR8 – Maintain regular communication with the campus community</i>	.067	1	.067	.158	.691
	<i>S2IR4 – Maintain regular communication with the campus community</i>	.131	1	.131	.256	.614

*Note.* S1 = Scenario 1; S2 = Scenario 2; PR = personal responsibility questions; IR = institutional responsibility questions; F = FERPA questions.

\*p = < .05

This analysis identifies an important relationship between an individual who is the emergency management coordinator and the knowledge that he/she possesses when personally responding to campus safety incidents, including the active shooter and hostage scenarios. As one would hope, emergency management coordinators are well informed on how to respond to incidents of campus violence.

#### *Number of Years in Profession*

When performing multivariate analysis on the number of years in profession as the only independent variable, the four dependent variables that were previously significant were no longer significant. However, four additional dependent variables were significant as Table 6 demonstrates. Significant variables are identified in bold, while italics indicate variables that were no longer significant. The new significant variables consist of four personal responsibility questions for both scenarios. The variables that

were no longer significant included one personal responsibility question for the active shooter scenario and all of the FERPA questions.

The number of years in the higher education profession was also a good indicator of how well prepared an administrator, faculty, or staff member is to respond to campus safety incidents. Three of the significant dependent variables related to contacting the appropriate authorities when an incident of campus violence occurs. Therefore, an employee who has more experience is more likely to be prepared to respond appropriately to campus safety incidents.

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Table 6

*Test of Between-Subjects Effects: Number of Years in Profession*

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
D7 – Number of years in profession	<b>S1PR4 – Call the Director of Public Safety/Chief of Police</b>	<b>58.919</b>	<b>45</b>	<b>1.309</b>	<b>1.456*</b>	<b>.045</b>
	<b>S1PR5 – Call 911</b>	<b>33.507</b>	<b>45</b>	<b>.745</b>	<b>1.764*</b>	<b>.005</b>
	<b>S1PR11 – Call 911</b>	<b>29.108</b>	<b>45</b>	<b>.647</b>	<b>1.743*</b>	<b>.006</b>
	<b>S2PR1 – I feel well prepared</b>	<b>92.226</b>	<b>45</b>	<b>2.049</b>	<b>1.519*</b>	<b>.029</b>
	<i>S1PR9 – Confront the gunman</i>	<i>46.540</i>	<i>45</i>	<i>1.034</i>	<i>1.122</i>	<i>.295</i>
	<i>F1 – Release information to Dave's parents</i>	<i>102.883</i>	<i>45</i>	<i>2.286</i>	<i>.965</i>	<i>.541</i>

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Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
D7 – Number of years in profession	<i>F2 – Release information to my colleagues</i>	92.492	45	2.055	1.072	.365
	<i>F3 – Release information to students</i>	83.072	45	1.846	.873	.698

*Note.* S1 = Scenario 1; S2 = Scenario 2; PR = personal responsibility questions; IR = institutional responsibility questions; F = FERPA questions.

\*p = < .05

#### *Participation in Training and/or Drills is Mandatory for Student Workers*

The test of between-subjects effects for the independent variable, participation in training and/or drills is mandatory for student workers, identified four additional dependent variables that were significant. There were three dependent variables that were no longer significant as Table 7 shows. Bold indicates new dependent variables that were significant, black identifies dependent variables that were previously identified as significant, and italics indicate dependent variables that were no longer significant. Three of the new significant variables were personal responsibility questions for both scenarios, and one variable was an institutional responsibility question for the hostage scenario. The variables that were no longer significant were a combination of personal responsibility, institutional responsibility, and FERPA questions.

Although students were not included in this research, it is interesting that student worker participation in training was significantly related to some of the dependent variables for both the active shooter and hostage scenarios. One might conclude that

some of the respondents were involved in training student workers and therefore became more knowledgeable about their personal and institutional responsibilities when responding to incidents of campus violence.

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Table 7

*Test of Between-Subjects Effects: Participation in Training and/or Drills is Mandatory for Student Workers*

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
E12 – Participation in training and/or drills is mandatory for student workers	<b>S1PR1 – I feel well prepared</b>	<b>16.328</b>	<b>4</b>	<b>4.082</b>	<b>3.491*</b>	<b>.009</b>
	S1PR2 – Leave my office/classroom to see what was happening	20.729	4	5.182	4.028*	.004
	<b>S1PR8 – Assist the injured person</b>	<b>13.733</b>	<b>4</b>	<b>3.433</b>	<b>4.319*</b>	<b>.002</b>
	S2PR1 – I feel well prepared	21.995	4	5.499	3.956*	.004
	<b>S2PR2 – Confront Dave physically</b>	<b>13.238</b>	<b>4</b>	<b>3.310</b>	<b>2.490*</b>	<b>.044</b>
	<b>S2IR4 – Maintain regular communication with the campus community</b>	<b>6.265</b>	<b>4</b>	<b>1.566</b>	<b>3.077*</b>	<b>.017</b>

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Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
E12 – Participation in training and/or drills is mandatory for student workers	<i>S1PR5 – Call 911</i>	4.525	4	1.131	2.252	.064
	<i>S1IR3 – Locking down the campus</i>	2.847	4	.712	1.085	.365
	<i>F3 – Release information to students</i>	13.262	4	3.315	1.670	.158

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*Note.* S1 = Scenario 1; S2 = Scenario 2; PR = personal responsibility questions; IR = institutional responsibility questions; F = FERPA questions.

\*p = < .05

### Emergency Management Planning and Training

The premise of this study was that personnel at institutions that have emergency management plans that include training will respond more consistently and accurately to potential campus safety incidents as well as have more knowledge of FERPA regulations when responding to these incidents. Many questions in this research focused on each institution's emergency management plan and active participation in training exercises. Following are the results that relate to emergency management planning and training.

#### *Emergency Management Plans*

Of the 245 participants in this research study, 82% strongly agreed or agreed that their institution had implemented an emergency management plan. However, only 62% of administrators, faculty, and staff strongly agreed or agreed that they have read their

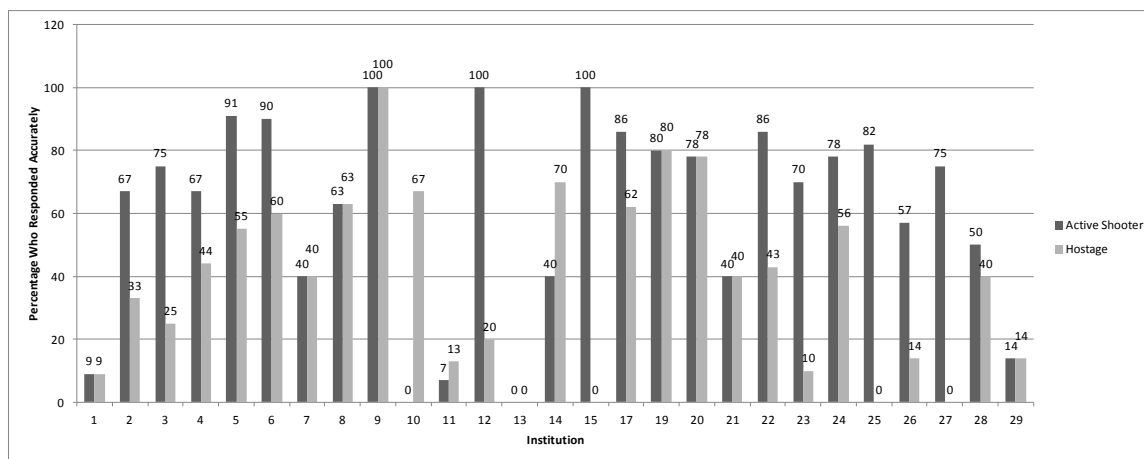
institution's emergency management plan. Administrators were most likely to read their institution's plan (85% strongly agreed or agreed), staff members were second (67% strongly agreed or agreed), while faculty were least likely to have read their college's plan (52% strongly agreed or agreed). Additionally, only 21% of participants strongly agreed or agreed that they were involved in the development of their institution's emergency management plan. Administrators were most likely to be involved in the development of their institution's plan with 52% indicating that they strongly agreed or agreed, followed by staff at 46%, and faculty at 5%.

In terms of content included in emergency management plans, 65% of participants indicated that they strongly agreed or agreed that their institution's plan addressed an active shooter situation, while only 49% strongly agreed or agreed that their plan discussed a hostage situation. Of the 27 emergency management plans reviewed, 24 (89%) addressed an active shooter situation, while only 15 (56%) included information on how to respond to a hostage situation.

When reviewing accuracy of response for what was included in each institution's emergency management plan, Figure 4 shows that participants indicated they were not very knowledgeable about what is included in their plans. While three institutions indicated 100% accuracy regarding whether an active shooter situation was included in their institution's emergency management plan, two institutions responded with 0% accuracy. Overall, 13 institutions (48%) were at least 75% accurate and 19 institutions (70%) were at least 50% accurate regarding the inclusion of an active shooter situation in their institution's emergency management plan. However, at three institutions, respondents were extremely unknowledgeable regarding the inclusion of an active

shooter scenario in their plans. At these institutions, 64%, 67%, and 80% of respondents, respectively, reported that their plan included this scenario when in actuality, it did not.

Accuracy regarding a hostage situation being included in plans was even lower. Only one institution responded with 100% accuracy, while four institutions responded with 0% accuracy. Three of the 27 institutions (11%) were at least 75% accurate and 10 institutions (37%) were at least 50% accurate regarding the inclusion of a hostage situation in their institution's plan. A more significant number of respondents indicated that their plans included a hostage situation when it did not. Respondents from eight institutions reported percentages ranging from 43% to 70% of agreement that their plan included response to this crisis when it did not. Since 38% of respondents indicated that they had not read their institution's emergency management plan, it was not surprising that awareness of what information is actually included in these plans was relatively low.



*Figure 4. Percentage Who Responded Accurately Regarding What is Included in Their Institution's Emergency Management Plan.*

It must be acknowledged at this point that in addition to uneven response rates by employee type, response rates also varied by institution. The researcher hoped to receive

at least five responses from each college but received four responses from two institutions and two responses from two of the 29 colleges. These four colleges were among the smallest in the state to participate, but these low rates contributed to the challenges of drawing firm conclusions from the data.

### *Training*

Only 35% of participants strongly agreed or agreed that they participate at least annually in training and/or drills related to campus violence incidents (e.g., active shooter and/or hostage situation). Training most frequently occurred with administrators (58% strongly agreed or agreed), followed by staff (50% strongly agreed or agreed), and then faculty (23% strongly agreed or agreed).

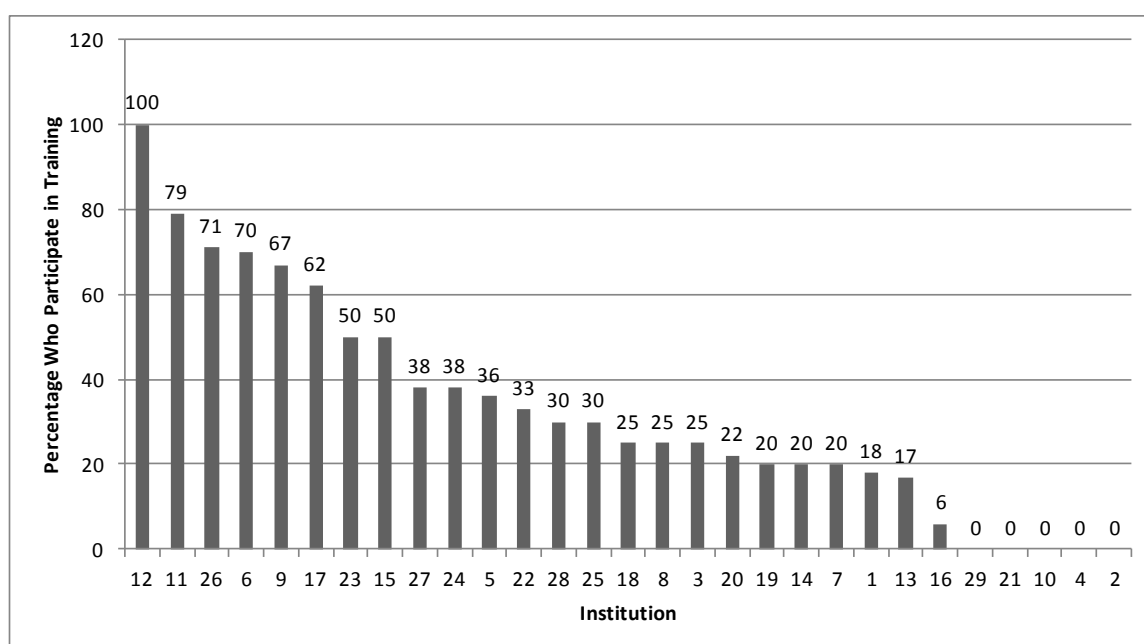
When asking about mandatory training and/or drills related to campus violence for employees, respondents indicated that full-time employees were more likely to receive training. Thirty-seven percent responded that they strongly agreed or agreed that administrators participate in training, followed by 27% for full-time staff, 26% for full-time faculty, 17% for part-time staff, 15% for part-time faculty, and 14% for student workers.

The hypotheses in this research study were framed according to institutions that have emergency management plans that include training and those that do not include training. According to the participants, responses ranged from 0% to 100% by institution that they strongly agreed or agreed that they participate in training and/or drills related to campus violence at least annually. Figure 5 reports that only respondents from one institution all agreed that they participate in training at least annually, while respondents from five institutions unanimously agreed that they do not participate in training at least



annually. Only eight institutions had consensus from at least 50% of their respondents that they participate in training exercises on an annual basis. It must again be noted that the number of respondents varied considerably from one institution to another. These percentages must be viewed as indications of training activity rather than as statistical evidence.

A limited number of respondents indicated that they participate in training and/or drills related to campus violence at least annually. Since the highest percentage of respondents was administrators, one might conclude that the training percentage may be higher because administrators are most likely to participate in training.



*Figure 5. Percentage Who Participate in Training by Institution (includes strongly agree and agree responses).*

### Null Hypotheses

The following null hypotheses were used to guide this research study. Each hypothesis is examined in terms of the data collected, and a determination is made to reject or fail to reject the null hypothesis.

**H<sub>0</sub>1:** Personnel at higher education institutions with an all-hazards emergency management plan that includes training will not respond more consistently to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training.

**H<sub>0</sub>2:** Personnel at higher education institutions with an all-hazards emergency management plan that includes training will not respond more accurately to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training.

**H<sub>0</sub>3:** Personnel at higher education institutions with an all-hazards emergency management plan that includes training will not have more knowledge of FERPA regulations when responding to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training.

**H<sub>0</sub>4:** There will not be more consistency in response to potential campus safety incidents by personnel in similar positions at various higher education institutions when the institutions have all-hazards emergency management plans that include training than institutions that have all-hazards emergency management plans that do not include training.

**H<sub>0</sub>5:** There will not be more knowledge of FERPA regulations when responding to potential campus safety incidents by personnel in similar positions at various higher education institutions when the institutions have all-hazards emergency management plans that include training than institutions that have all-hazards emergency management plans that do not include training.

**H<sub>0</sub>6:** Personnel in administrative positions at higher education institutions will not respond more accurately to potential campus safety incidents than personnel in non-administrative positions.

When reviewing consistency of response for the personal responsibility, institutional responsibility, and FERPA questions for the active shooter and hostage scenarios, the researcher looked for the frequency with which respondents answered the same within an institution. For accuracy of response, the correct answers to the personal responsibility questions for each institution were identified by reviewing each institution's emergency management plan. Based on this criterion, each individual's responses were manually compared with the correct response for his/her institution.

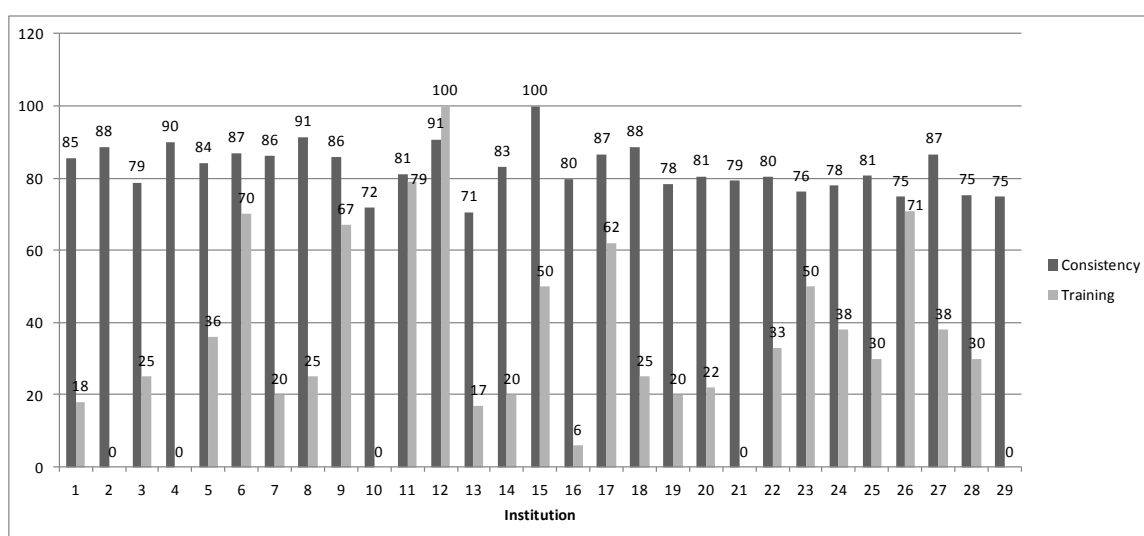
*Null Hypothesis #1*

**H<sub>0</sub>1:** Personnel at higher education institutions with an all-hazards emergency management plan that includes training will not respond more consistently to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training.

This hypothesis first is reviewed in terms of consistency of response to the personal responsibility questions, and then the institutional responsibility questions for the active shooter scenario, by institution and by participation in training. The analysis is

then repeated for the hostage scenario in the same sequence. Both scenarios are then reviewed together for overall consistency for each set of questions.

When reviewing the mean consistency in response to all of the personal responsibility questions for the active shooter scenario in Figure 6, 19 of the 29 institutions reported at least an 80% mean consistency rate, while 27 of the 29 institutions indicated at least a 75% mean consistency rate. All institutions responded consistently to at least 71% of the personal responsibility questions for the active shooter scenario.

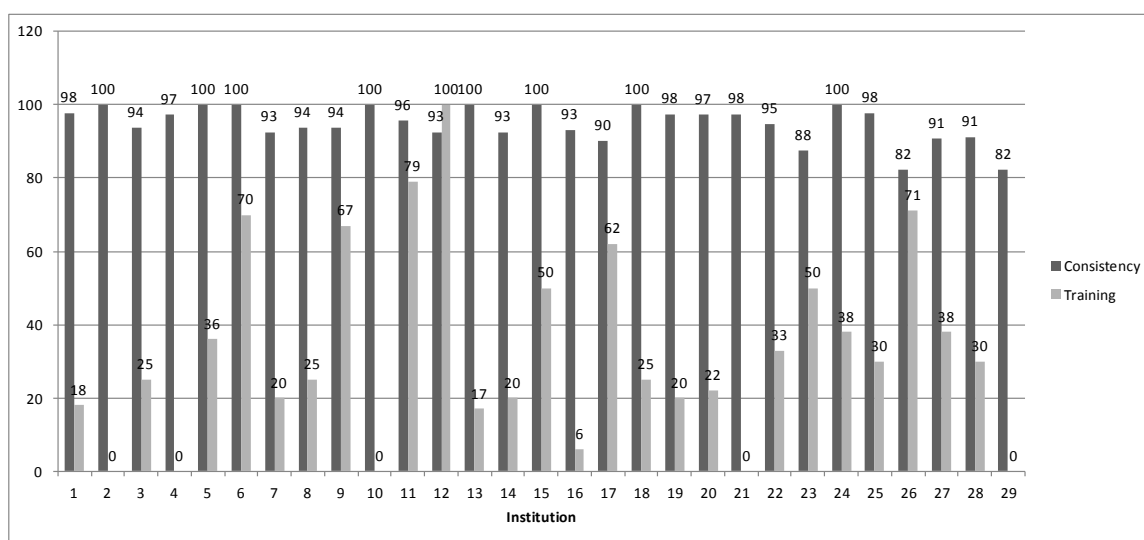


*Figure 6. Mean Percentage of Consistency for the Personal Responsibility Questions for the Active Shooter Scenario and Percentage of Respondents Who Participate in Training at Least Annually by Institution.*

When comparing the mean consistency in response for the personal responsibility questions to participation in training, the data showed that the level of training provided did not indicate that personnel will respond more consistently. Figure 6 indicates that the mean percentage of consistency in response for the personal responsibility questions for the active shooter scenario was higher for 28 of the 29 institutions than for the percentage

who indicated that they participate in training at least annually. While some institutions with high consistency rates indicated that they participate in more training, other institutions participating in little or no training still had high consistency rates. For example, Institution #12 had a mean consistency rate of 91% and a training participation rate of 100%. However, Institution #4 had a mean consistency rate of 90% and no participation in training.

Figure 7 indicates that eight of the 29 institutions reported 100% mean consistency when responding to the institutional responsibility questions for the active shooter scenario. Twenty-six of the 29 institutions responded the same for at least 90% of the questions. All institutions responded consistently to at least 82% of the institutional responsibility questions.



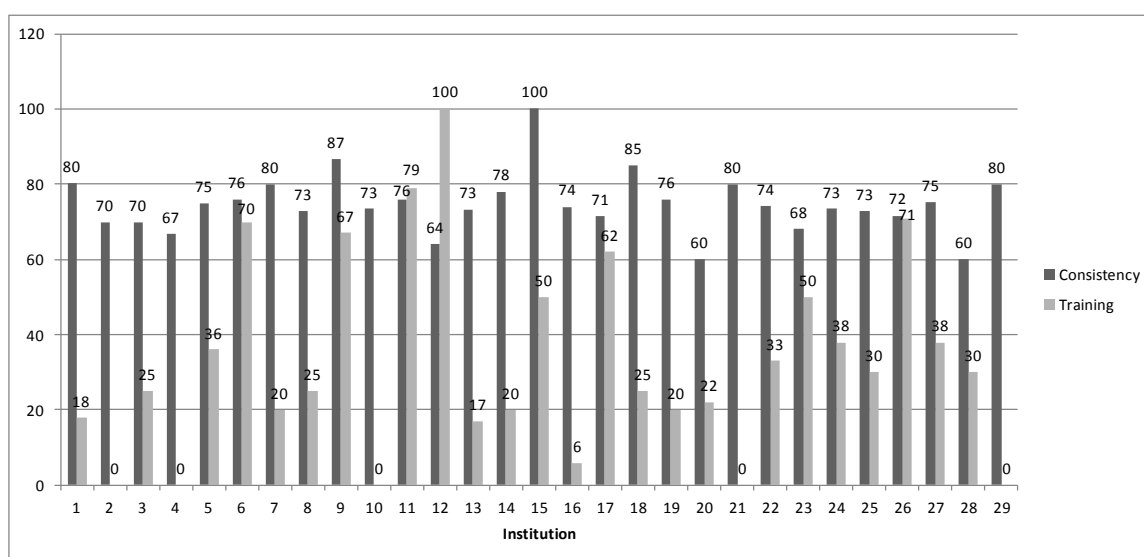
*Figure 7. Mean Percentage of Consistency for the Institutional Responsibility Questions for the Active Shooter Scenario and Percentage of Respondents Who Participate in Training at Least Annually by Institution.*

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When comparing the mean consistency in response for the institutional responsibility questions to participation in training, data indicated that the level of

training provided did not show that personnel will respond more consistently. The mean percentage of consistency in response for the institutional responsibility questions for the active shooter scenario was higher for 28 of the 29 institutions than for the percentage who indicated that they participate in annual training. There are four institutions who responded at least 97% consistently to the institutional responsibility questions; however, these respondents indicated that they do not participate in annual training.

Figure 8 indicates that 13 institutions reported consistency in response to at least 75% of the personal responsibility questions for the hostage scenario. All 29 institutions indicated consistency on at least 60% of the personal responsibility questions.

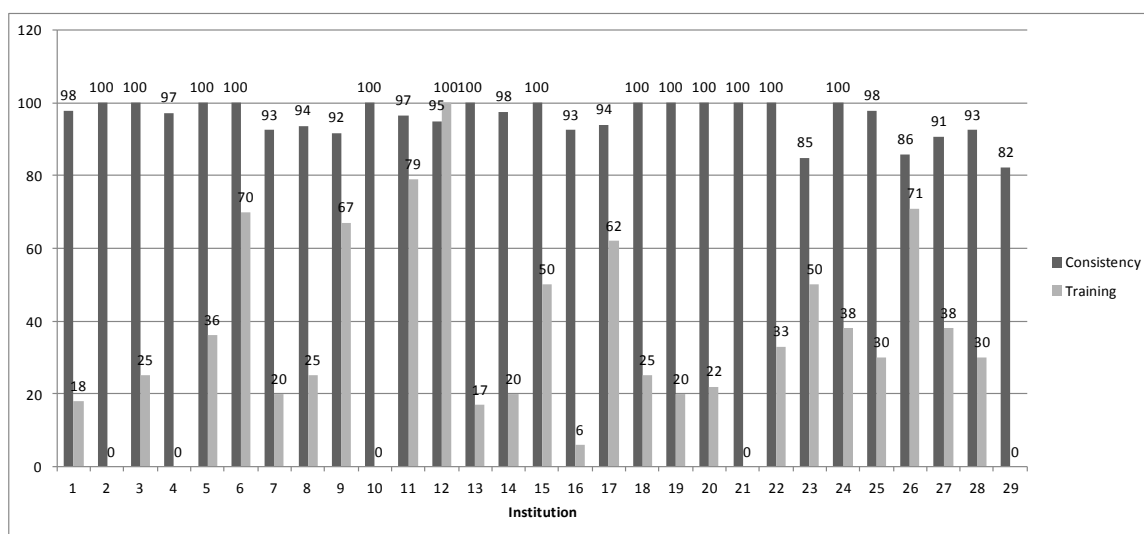


*Figure 8. Mean Percentage of Consistency for the Personal Responsibility Questions for the Hostage Scenario and Percentage of Respondents Who Participate in Training at Least Annually by Institution.*

Data demonstrated that the level of training provided did not indicate that personnel will respond more consistently. The mean percentage of consistency in response for the personal responsibility questions for the hostage scenario was higher for

27 of the 29 institutions than for the percentage who indicated that they participate in training at least annually. The three institutions that reported the highest mean consistency in response to the personal responsibility questions have varied training participation rates. Institution #15, for example, had 100% mean consistency in response to the personal responsibility questions; however, only 50% of the respondents indicated that they participate in training at least annually. Institution #9 had 87% consistency in response with a higher level of participation in training at 67%. Institution #18 responded 85% consistently on the personal responsibility questions but only 25% of the respondents indicated participation in annual training.

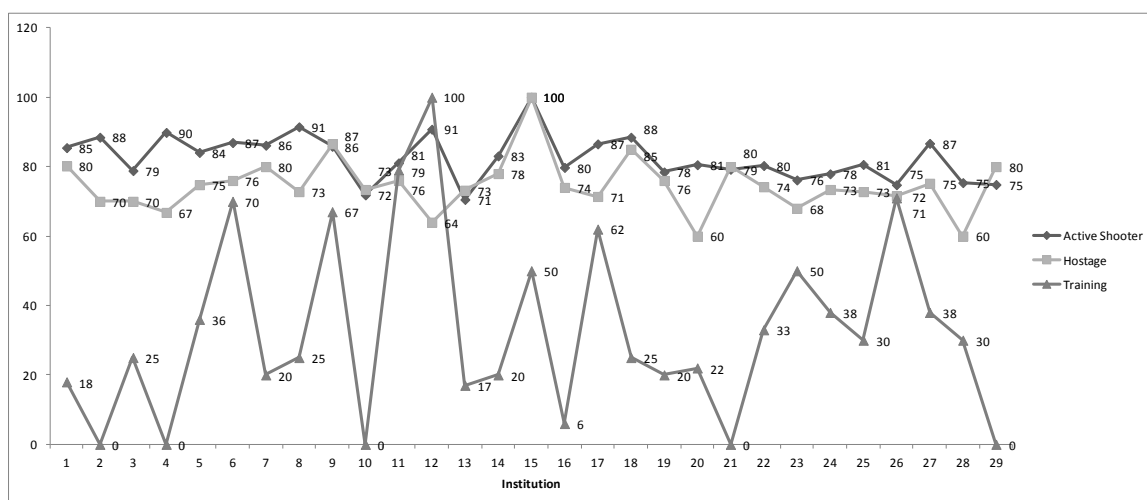
Thirteen of the 29 institutions reported consensus on all institutional responsibility questions for the hostage scenario, while 26 of the institutions responded consistently on at least 90% of the questions (see Figure 9). All institutions responded consistently on at least 82% of the institutional responsibility questions for the hostage scenario.



*Figure 9.* Mean Percentage of Consistency for the Institutional Responsibility Questions for the Hostage Scenario and Percentage of Respondents Who Participate in Training at Least Annually by Institution.

The level of training provided still did not indicate that personnel will respond more consistently. The mean percentage of consistency in response for the institutional responsibility questions for the hostage scenario was higher for 28 of the 29 institutions than for the percentage that indicated that they participate in training at least annually. There were four institutions that responded at least 97% consistently to the institutional responsibility questions; however, the respondents indicated that they do not participate in training on an annual basis at their institutions.

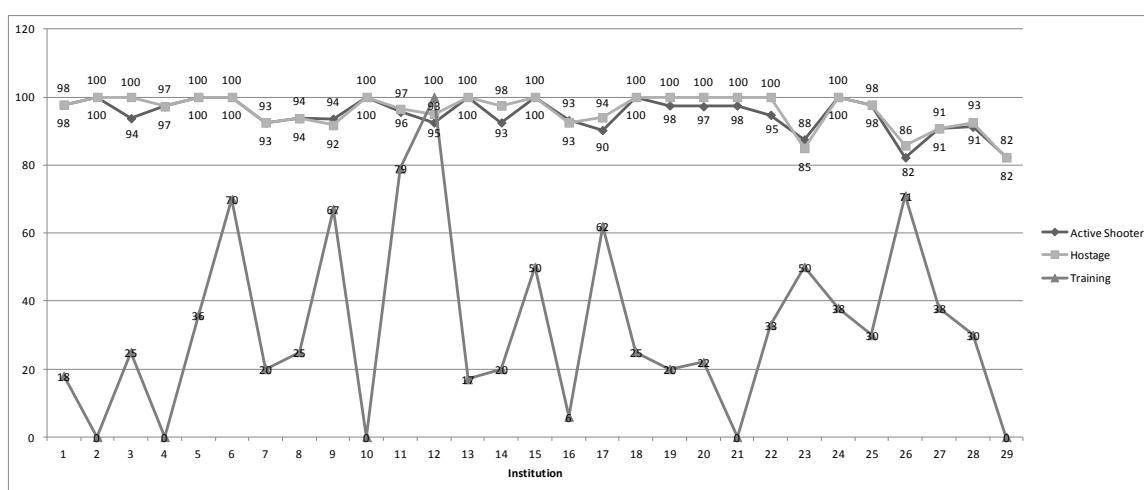
When reviewing consistency in response to the personal responsibility questions for the active shooter and hostage scenarios, Institution #15 reported 100% consistency for both. Overall, most institutions had higher mean consistency rates for the active shooter scenario as opposed to the hostage scenario as Figure 10 indicates. Additionally, the level of participation in annual training was much lower than the mean consistency in response to the personal responsibility questions.



*Figure 10.* Mean Percentage of Consistency for all Personal Responsibility Questions and Percentage of Respondents Who Participate in Training at Least Annually by Institution.



However, for the institutional responsibility questions, Figure 11 shows that 16 institutions reported the same mean percentage of consistency for both scenarios. Of the remaining institutions, 11 responded more consistently to the hostage questions than the active shooter questions. The level of participation in training was much lower than the mean consistency in response to the institutional responsibility questions. Only one institution (Institution #12) had participation in training that was comparable to consistency in response to the institutional responsibility questions.



*Figure 11. Mean Percentage of Consistency for all Institutional Responsibility Questions and Percentage of Respondents Who Participate in Training at Least Annually by Institution.*

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Based on the above information, Null Hypothesis #1 failed to be rejected.

Personnel at higher education institutions with an all-hazards emergency management plan that includes training did not respond more consistently to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that did not include training. Because of the issues discussed earlier related to rates of response, the fact that this null hypothesis failed to be rejected must be

seen primarily as an indication that the relationship between training and the consistency of employee responses to crisis situations may not be related and demands further investigation.

*Null Hypothesis #2*

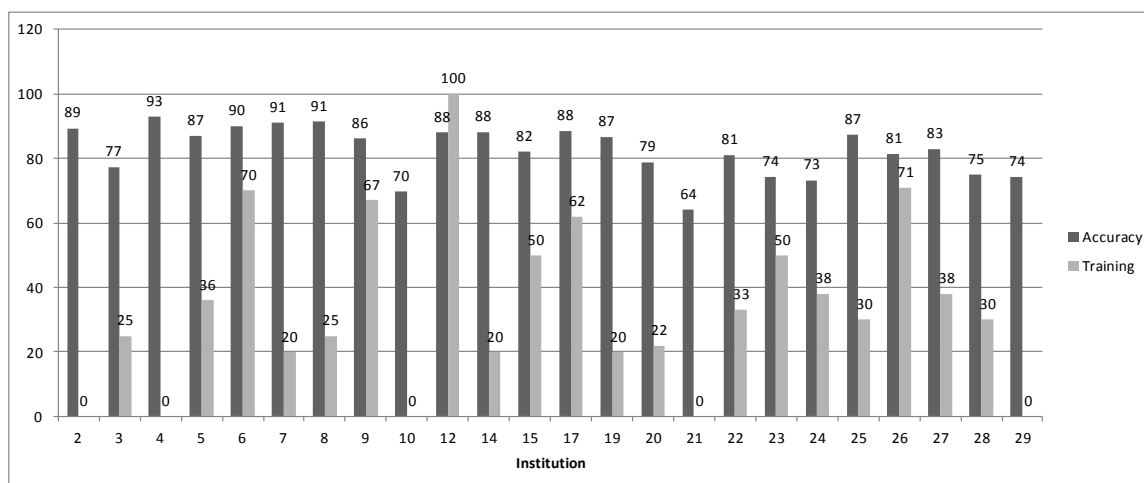
**H<sub>0</sub>2:** Personnel at higher education institutions with an all-hazards emergency management plan that includes training will not respond more accurately to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training.

This hypothesis looked specifically at the accuracy of response to 16 of the personal responsibility questions for the active shooter and hostage scenarios. Twenty-four institutions included an active shooter situation in their emergency management plans, while 15 institutions referenced a hostage situation in their plans. This hypothesis focused exclusively on the personal responsibility questions because the researcher discovered that many of the emergency management documents did not identify how to respond to the institutional responsibility questions.

Figure 12 shows that 13 of the 24 institutions responded with at least 85% mean accuracy to the personal responsibility questions for the active shooter scenario, and 19 of the 24 institutions responded with at least 75% accuracy. The lowest percentage of mean accuracy in response to the personal responsibility questions for the active shooter scenario was 64%.

Data demonstrated that the level of training provided did not indicate that personnel will respond more accurately. Only Institution #12 reported a higher percentage of participation in training than the mean percentage of accuracy to the

personal responsibility questions for the active shooter scenario. Two institutions, #2 and #4, reported 89% and 93% accuracy, respectively, with no participation in training. However, the two institutions with the lowest mean percentage of accuracy, #10 and #21, with 70% and 64% respectively, also indicated no participation in training.

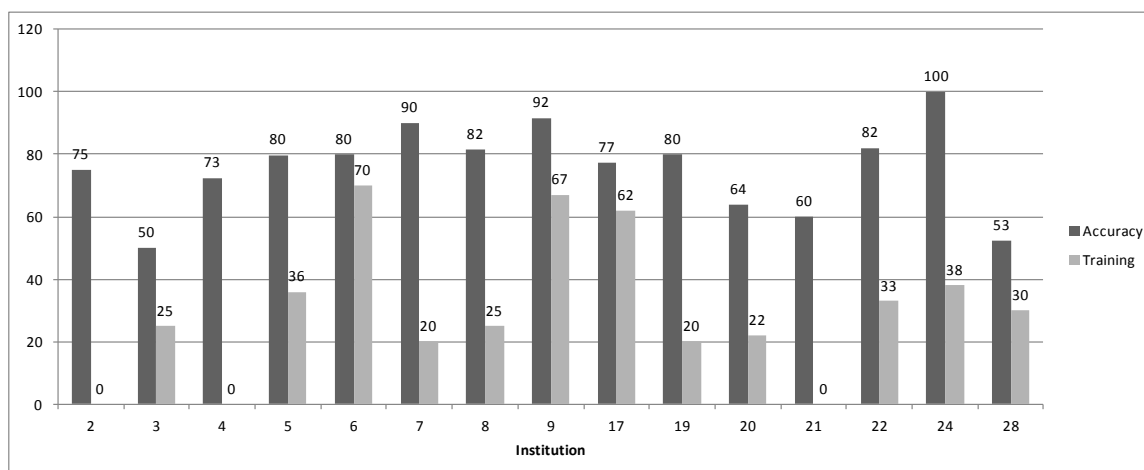


*Figure 12. Mean Percentage of Accuracy for the Personal Responsibility Questions for the Active Shooter Scenario and Percentage of Respondents Who Participate in Training at Least Annually by Institution.*

Figure 13 indicates a wider range of distribution on mean accuracy in response to the personal responsibility questions for the hostage scenario. The percentage of mean accuracy ranged from 50% to 100%. Ten of the 15 institutions responded with at least 75% accuracy.

Participation in training did not indicate that personnel will respond more accurately to the personal responsibility questions for the hostage scenario. No institutions indicated a higher percentage of participation in training than the mean percentage of accuracy to the personal responsibility questions. Institutions #24 and #7

reported a mean accuracy of 100% and 90% respectively, with only 38% and 20% participation in annual training. However, Institution #3 only reported a 50% mean accuracy with 25% participation in annual training. There were also three institutions that reported 80% mean accuracy with participation in training ranging from 20% to 70%.



*Figure 13.* Mean Percentage of Accuracy for the Personal Responsibility Questions for the Hostage Scenario and Percentage of Respondents Who Participate in Training at Least Annually by Institution.

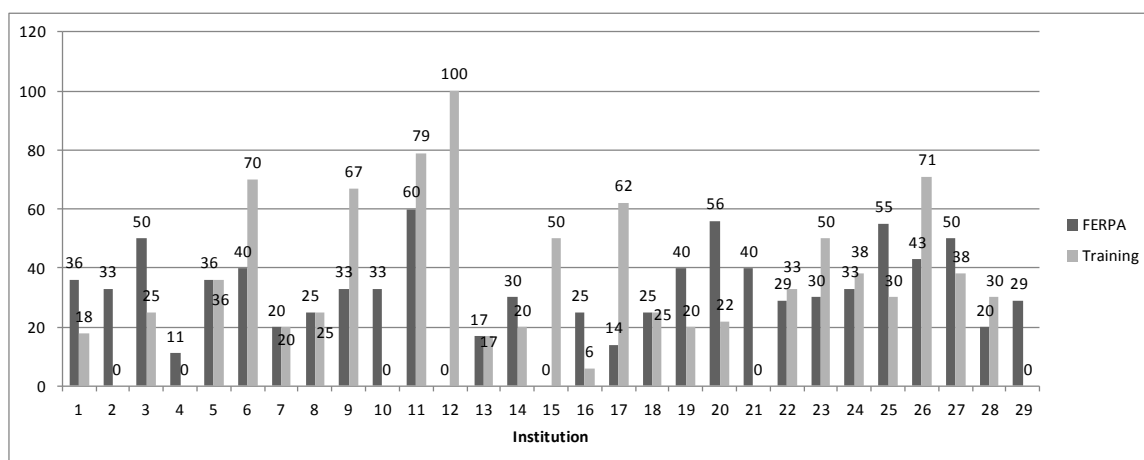
These results indicate that Null Hypothesis #2 failed to be rejected. Personnel at higher education institutions with an all-hazards emergency management plan that includes training did not respond more accurately to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that did not include training. Because of the issues discussed earlier related to rates of response, the fact that this null hypothesis failed to be rejected must be seen primarily as an indication that the relationship between training and the accuracy of employee responses to crisis situations may not be related and demands further investigation.

### *Null Hypothesis #3*

**H<sub>0</sub>3:** Personnel at higher education institutions with an all-hazards emergency management plan that includes training will not have more knowledge of FERPA regulations when responding to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training.

The following tables identify institutions that indicated that they strongly agreed or agreed that information regarding Dave's behavior may be released to: Figure 14, Dave's parents; Figure 15, colleagues; and Figure 16, students, accompanied by rates of participation in annual training.

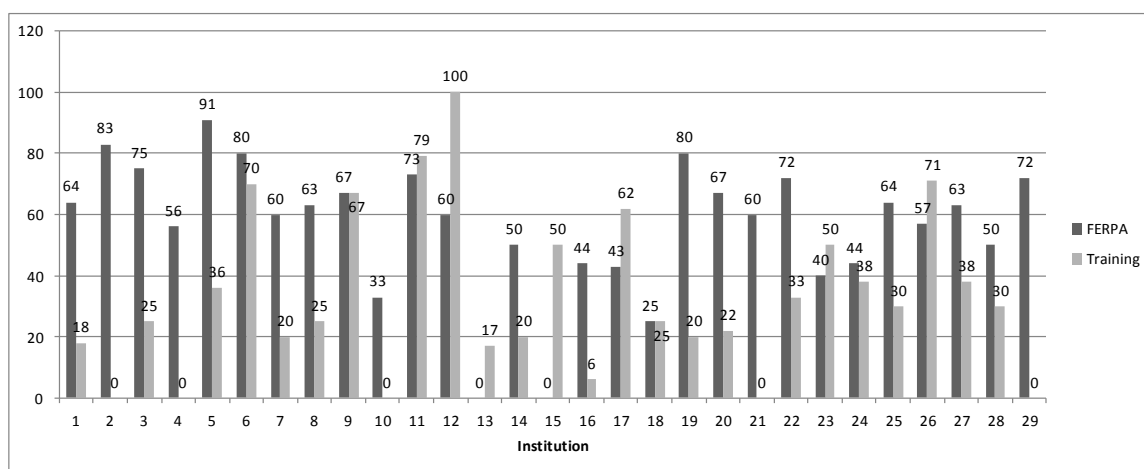
Figure 14 indicates that the mean percentage who reported that they strongly agreed or agreed that information may be released to Dave's parents (the correct response) ranged from 0% to 60%. Only five institutions reported a mean percentage of 50% or above, while 10 institutions indicated a mean percentage of 25% or below.



*Figure 14.* Mean Percentage Who Indicated That FERPA Allows Them to Release Information to Dave's Parents and Percentage of Respondents Who Participate in Training at Least Annually by Institution.

Eleven of the 29 institutions had a higher percentage of individuals who participate in annual training than the mean percentage of institutions who strongly agreed or agreed that information may be released to Dave's parents. Chapter 5 further discusses the significance of this finding since FERPA permits the release of this information.

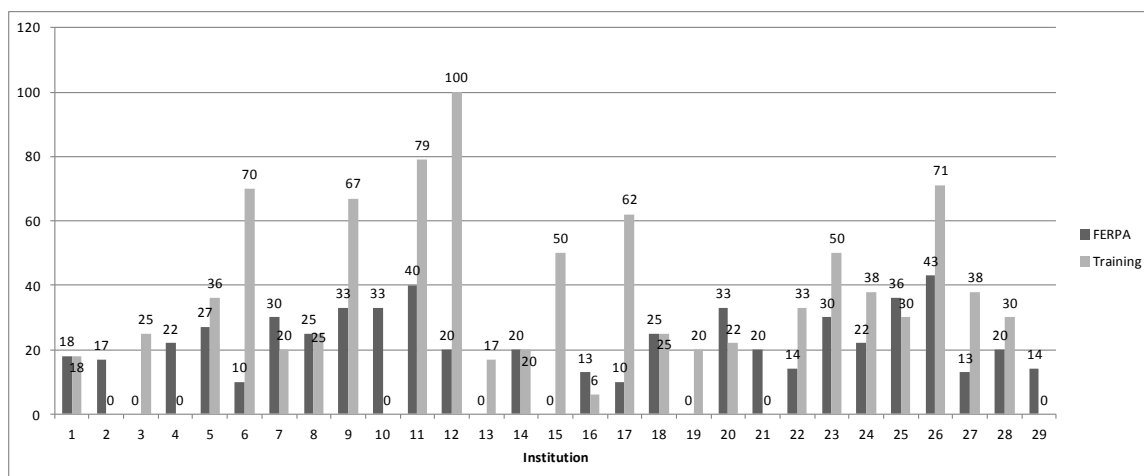
The mean percentage who reported that FERPA allowed them to release information about Dave's behavior to their colleagues was higher than the mean percentage who indicated that they may release information to Dave's parents. Figure 15 shows the mean percentage of individuals who strongly agreed or agreed ranged from 0% to 91%. Twenty-one of the 29 institutions indicated a mean percentage of at least 50% who strongly agreed or agreed that they may release information to their colleagues; in this case, the correct response. Two institutions, #13 and #15, both reported that no information may be released to their colleagues.



*Figure 15. Mean Percentage Who Indicated That FERPA Allows Them to Release Information to Their Colleagues and Percentage of Respondents Who Participate in Training at Least Annually by Institution.*

Only seven institutions had a higher percentage of individuals who participate in annual training than the mean percentage of institutions who strongly agreed or agreed that information may be released to their colleagues. Chapter 5 further discusses the significance of this finding since FERPA permits the release of this information.

Figure 16 indicates that a much lower percentage of institutions reported that they may release information regarding Dave's behavior to students. The mean percentage who responded that they strongly agreed or agreed (the correct response) ranged from 0% to 43%. Four institutions unanimously agreed that no information may be released to students, while 11 institutions reported at least 25% agreement that information may be released.



*Figure 16.* Mean Percentage Who Indicated That FERPA Allows Them to Release Information to Students and Percentage of Respondents Who Participate in Training at Least Annually by Institution.

This FERPA scenario reports even more inconsistency. Sixteen of the 29 institutions reported a higher level of training participation on an annual basis than the mean percentage who responded that they strongly agreed or agreed that information

regarding Dave's behavior may be released to students. Since FERPA permits the release of information, training is not effective in educating administrators, faculty, and staff on the nuances of FERPA.

The above results indicate that Null Hypothesis #3 failed to be rejected. Based on the data analyzed, personnel at higher education institutions with an all-hazards emergency management plan that includes training did not have more knowledge of FERPA regulations when responding to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that did not include training. Since response rates for each personnel group and institution did not provide numbers that uniformly yielded statistically reliable data, the failure to reject this null hypothesis must be seen only as an indication that training is not adequately preparing employees to understand FERPA requirements, and this question demands further study.

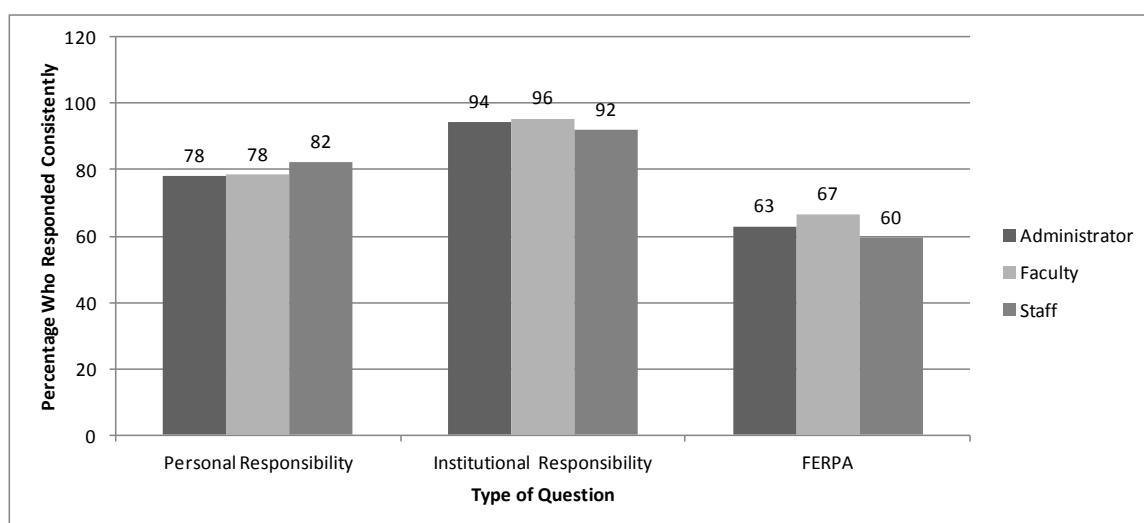
#### *Null Hypothesis #4*

**H<sub>0</sub>4:** There will not be more consistency in response to potential campus safety incidents by personnel in similar positions at various higher education institutions when the institutions have all-hazards emergency management plans that include training than institutions that have all-hazards emergency management plans that do not include training.

This hypothesis reviewed consistency in response by classification, which includes administrators, faculty, and staff. Figure 17 indicates that the mean consistency percentage for each classification was very similar and only varied between 4% and 7% within each type of question.

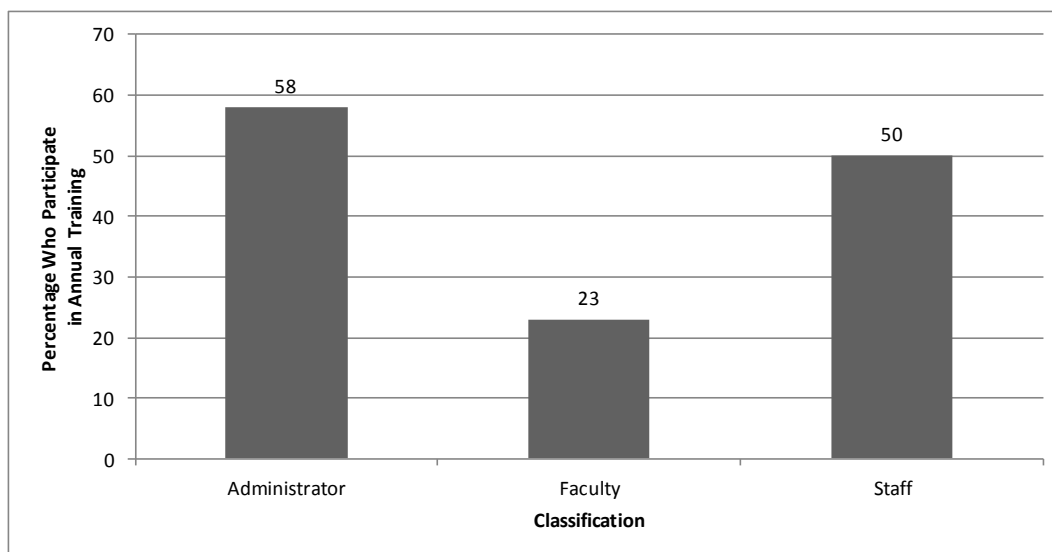


For the personal responsibility, institutional responsibility, and FERPA questions, administrators, faculty, and staff responded most consistently to the institutional responsibility questions with mean percentages ranging from 92% to 96%. All three groups responded least consistently to the FERPA questions with mean percentages ranging from 60% to 67%. Overall, faculty members reported the highest mean percentage of consistency for the institutional responsibility and FERPA questions, while staff members reported the highest mean consistency rate for the personal responsibility questions.



*Figure 17. Mean Percentage Who Responded Consistently by Classification.*

Although faculty members responded most consistently for two of the three types of questions, Figure 18 reports that faculty responding to the survey indicated participation in the least amount of training (23%). Administrators indicated the highest percentage of participation in training at 58% even though their mean consistency response rates were second on all three types of questions.



*Figure 18. Percentage Who Participate in Annual Training by Classification (includes strongly agree and agree responses).*

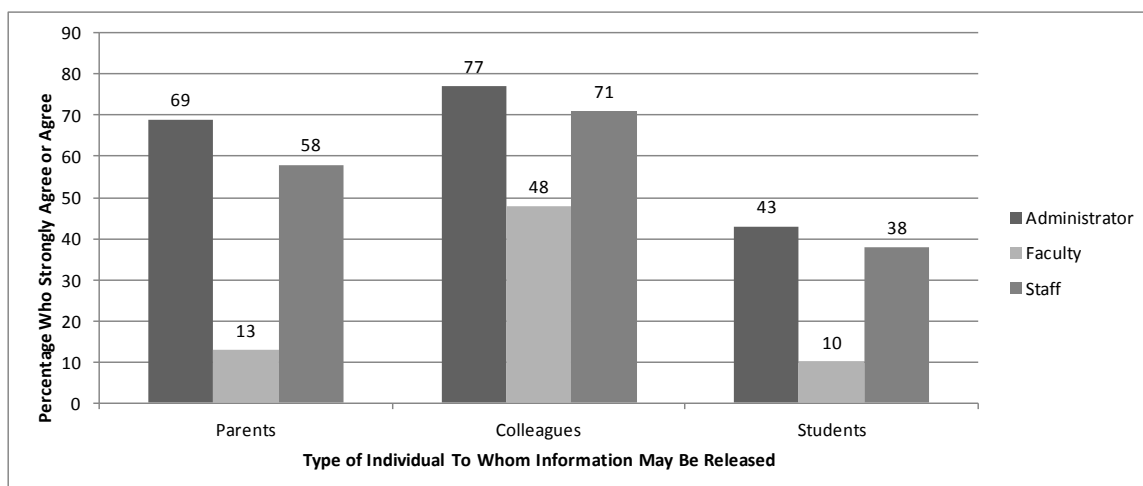
The results indicate that based on the data available, Null Hypothesis #4 failed to be rejected. There was not more consistency in response to potential campus safety incidents by personnel in similar positions at various higher education institutions when the institutions have all-hazards emergency management plans that include training than institutions that have all-hazards emergency management plans that did not include training. Again, support of this null hypothesis is based on data that were compromised by a low response rate by one of the employee groups – staff. To be able to conclusively test this null hypothesis, this study needs to be replicated with data that proportionately represent the three employee divisions.

#### *Null Hypothesis #5*

**H<sub>0</sub>5:** There will not be more knowledge of FERPA regulations when responding to potential campus safety incidents by personnel in similar positions at various higher education institutions when the institutions have all-hazards emergency management

plans that include training than institutions that have all-hazards emergency management plans that do not include training.

FERPA permits the release of information regarding Dave's behavior to his parents, colleagues, and students. Administrators reported the highest mean percentage of accuracy for each group of individuals to whom information may be released (see Figure 19). Sixty-nine percent of administrators indicated that they strongly agreed or agreed that information may be released to Dave's parents, 77% responded that information may be shared with colleagues, and 43% reported that information may be released to students. Faculty indicated the lowest mean percentage of accuracy for Dave's parents, colleagues, and students, with 13%, 48%, and 10%, respectively.



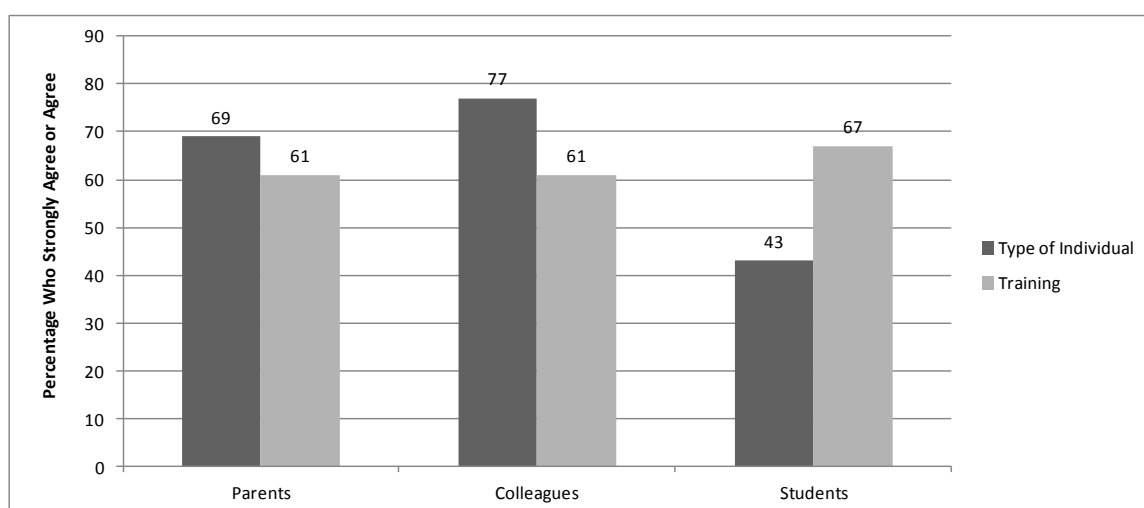
*Figure 19. FERPA Allows Me to Release Information Regarding Dave's Behavior to the Following Individuals (includes strongly agree and agree responses).*

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The data analyzed in this study indicated that participation in training played a significant role in this hypothesis and resulted in the null hypothesis being rejected. As Figures 20, 21, and 22 indicate, a higher percentage of administrators participate in

training as part of their institution's emergency management plan, followed by staff, and then faculty.

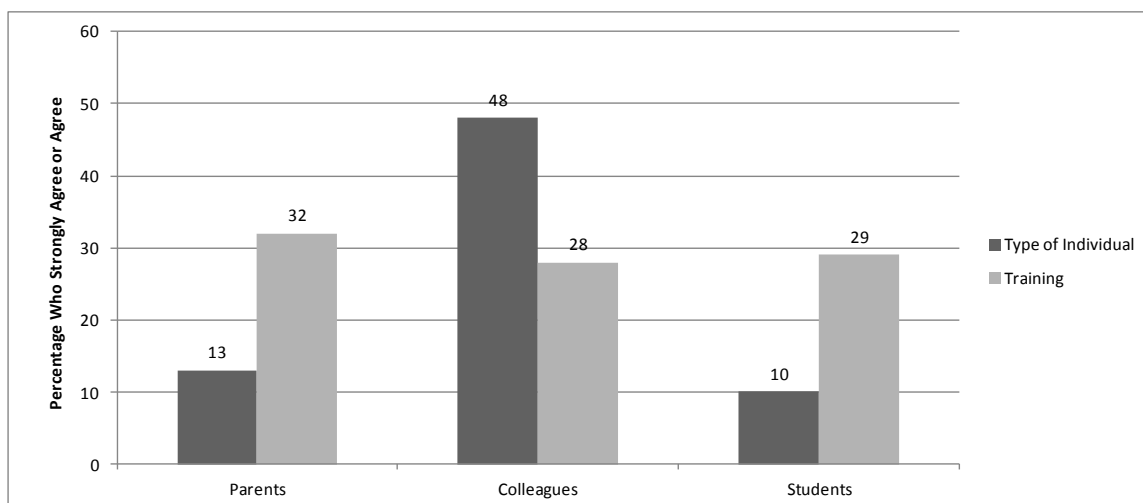
As Figure 20 reports, while 69% of administrators indicated that information regarding Dave's behavior may be shared with Dave's parents, 61% strongly agreed or agreed that they participate in training at least annually. Of the 77% who strongly agreed or agreed that information may be released to their colleagues, 61% participate in training exercises. Administrators were least likely to release information to students. While 43% reported that information may be shared with students, 67% reported participation in annual training.



*Figure 20. Administrators Who Strongly Agree or Agree That FERPA Allows Them to Release Information Regarding Dave's Behavior to the Following Individuals and Percentage of Respondents Who Participate in Training at Least Annually.*

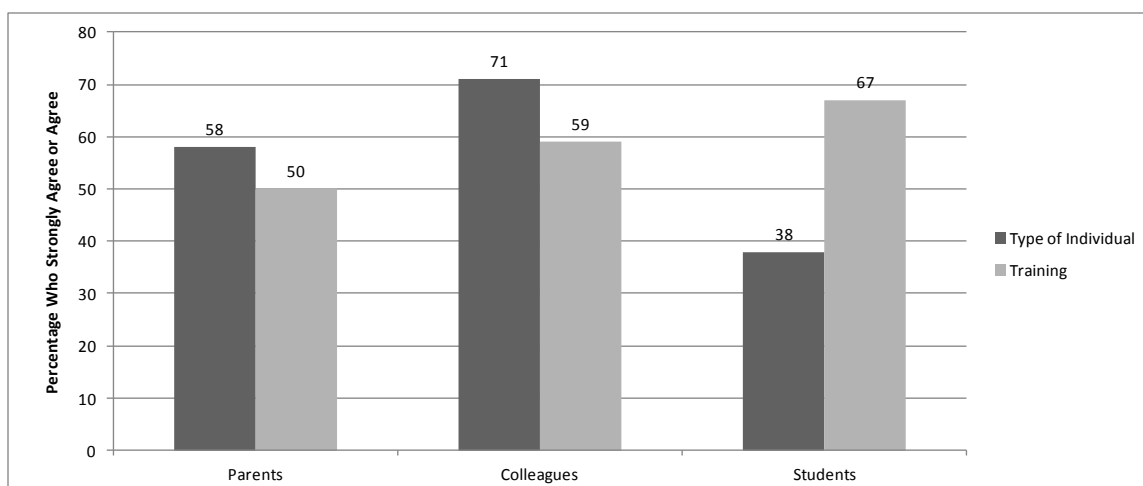
Figure 21 reports that faculty participate the least in training as part of their emergency management plan. While 13% indicated that information may be released to Dave's parents, 32% participate in annual training. Faculty respondents were more comfortable releasing information to colleagues. Of the 48% who would release

information, only 28% participate in training. Only 10% of faculty strongly agreed or agreed that they would release information to students; however, 29% participate in annual training exercises.



*Figure 21.* Faculty Who Strongly Agree or Agree That FERPA Allows Them to Release Information Regarding Dave's Behavior to the Following Individuals and Percentage of Respondents Who Participate in Training at Least Annually.

Staff members indicated greater participation in training than faculty. Figure 22 indicates that while 58% of staff would release information to Dave's parents, 50% participate in annual training as part of their emergency management plan. Of the 71% who strongly agreed or agreed that information may be shared with colleagues, 59% engage in annual training. Staff members were also least likely to release information to students. While 38% indicated that information may be shared with students, 67% participate in annual training.



*Figure 22. Staff Who Strongly Agree or Agree That FERPA Allows Them to Release Information Regarding Dave's Behavior to the Following Individuals and Percentage of Respondents Who Participate in Training at Least Annually.*

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Null Hypothesis #5 is rejected. Data indicated that administrators who participate in annual training as part of their emergency management plans have more knowledge of FERPA regulations, followed by staff, and then faculty. Therefore, there is more knowledge of FERPA regulations when responding to potential campus safety incidents by personnel in similar positions at various higher education institutions when the institutions have all-hazards emergency management plans that include training than institutions that have all-hazards emergency management plans that did not include training. Since the response rate for staff was lower than that desired for valid statistical analysis, conclusions about staff can only be inferred for this null hypothesis, and further study is needed to confirm this relationship between training and knowledge about FERPA.

### *Null Hypothesis #6*

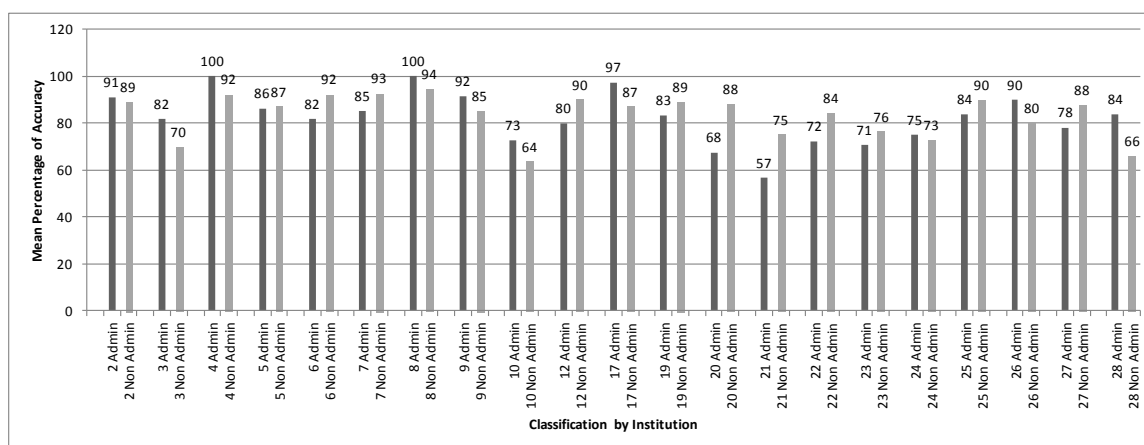
**H<sub>0</sub>6:** Personnel in administrative positions at higher education institutions will not respond more accurately to potential campus safety incidents than personnel in non-administrative positions.

This hypothesis specifically looked at accuracy of response for the personal responsibility questions by administrators as compared to non-administrators (faculty and staff). For the active shooter scenario, responses for 21 institutions are displayed. For the hostage scenario, responses for 15 institutions are presented. The numbers vary based on the number of plans available that addressed the specific scenarios. Additionally, there may not have been any administrators who completed the survey at some of the participating institutions.

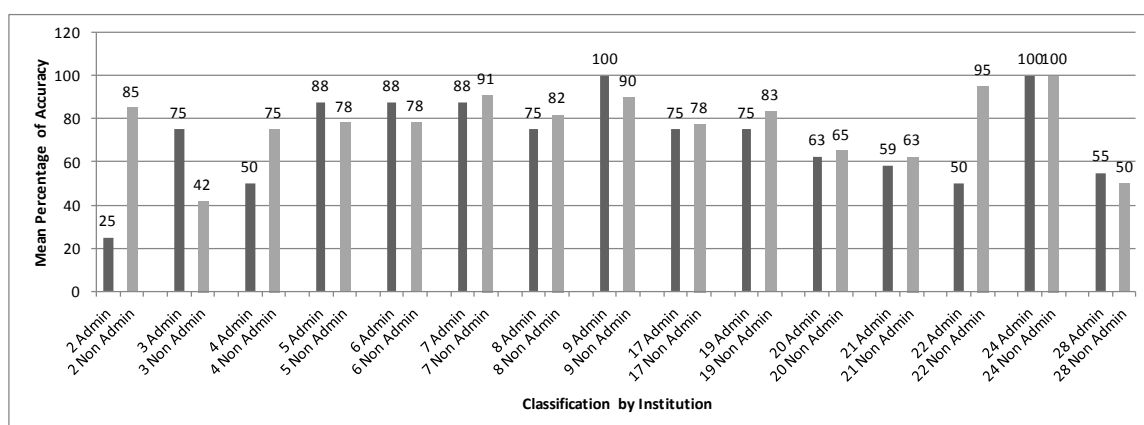
Figure 23 shows that for the active shooter scenario, administrators responded more accurately at 10 institutions, while non-administrators responded more accurately at the remaining 11 institutions. The mean percentage of accuracy for administrators ranged from 57% to 100%. Administrators at 14 institutions reported a mean percentage of accuracy of at least 80% for the active shooter scenario. For non-administrators, the mean percentage ranged from 64% to 94%. Non-administrators at 15 institutions reported a mean percentage of accuracy of at least 80%. The smallest variation between administrators and non-administrators at one institution was 1%, while the largest difference was 20%.

Figure 24 identifies the mean percentage of accuracy for the hostage scenario for administrators and non-administrators. Administrators responded with the highest mean percentage of accuracy at five institutions, non-administrators reported the highest mean

percentage of accuracy at nine institutions, and at one institution, administrators and non-administrators tied with 100% accuracy on all questions. The mean percentage of accuracy ranged from 25% to 100% for administrators and from 42% to 100% for non-administrators. Administrators at five institutions responded with at least 80% mean accuracy for the hostage scenario, while non-administrators at seven institutions reported at least 80% mean accuracy.



*Figure 23. Mean Percentage of Accuracy for the Active Shooter Scenario by Classification.*



*Figure 24. Mean Percentage of Accuracy for the Hostage Scenario by Classification.*



Based on the findings, Null Hypothesis #6 failed to be rejected. Personnel in administrative positions at higher education institutions did not respond more accurately to potential campus safety incidents than personnel in non-administrative positions. Response rates by administrators in this study and by institution were such that this statistical analysis can be viewed as valid.

#### Comments Received About Research

The researcher received a variety of comments from both respondents and non-respondents regarding her study. The topic of campus safety causes concern for some individuals and institutions and clearly limited the individuals who were willing to participate. For example, one employee who was on the request list felt it was inappropriate for him as the Campus Police Chief to complete the survey because his institution is not fully prepared to deal with the types of scenarios presented in the survey. Another respondent indicated that she completed the survey but struggled because her institution does not have an emergency management plan in place. A third noted that closed-ended questions made it difficult to respond to some questions and that open-ended responses would have been helpful. One respondent expressed concern about how the questions were worded and how the data would be used. He indicated that there are many variables associated with each type of incident and that situational factors may dictate how to respond. Also, one individual asked to be removed from the study. Nine individuals who were invited to participate asked the researcher if the survey was intended for him/her and/or alerted the researcher that they had forwarded the survey to another individual who was more knowledgeable. One respondent indicated that originally he was not sure if he qualified to complete the survey.

Additionally, three respondents expressed some confusion about the wording of the FERPA questions, specifically if the researcher was referring to Dave's behavior as in the moment of the violent incidents vs. generally before or after an incident occurred. Another respondent noted that there were no questions about behavioral intervention teams included in the survey. As noted in Chapter 3, four institutions chose not to participate in this study. One institution advised that they were in the process of reviewing their emergency management plan and would not be good research subjects. Another institution indicated that they were uncomfortable with the content of the questions and how it relates to identifying readiness to respond to campus violence. A third institution advised that their schedule would not allow participation. The final institution would not provide a reason for declining to participate.

The researcher also received several favorable comments about her research. Many individuals expressed interest in the study and its findings and look forward to reading the results of this survey or listening to a presentation of the results.

### Summary

This chapter provided a detailed description of the participants in this research study, a review of the survey instrument and its internal reliability, and how the researcher dealt with missing data. The General Linear Model – multivariate analysis with multiple criterion variables was used to analyze data and identify relationships between dependent and/or independent variables. Crosstabulations and case summaries were analyzed to decide whether to reject or fail to reject the null hypotheses. Based upon these data:

**H<sub>0</sub>1:** Personnel at higher education institutions with an all-hazards emergency management plan that includes training will not respond more consistently to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training. **Failed to be rejected.**

**H<sub>0</sub>2:** Personnel at higher education institutions with an all-hazards emergency management plan that includes training will not respond more accurately to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training. **Failed to be rejected.**

**H<sub>0</sub>3:** Personnel at higher education institutions with an all-hazards emergency management plan that includes training will not have more knowledge of FERPA regulations when responding to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training. **Failed to be rejected.**

**H<sub>0</sub>4:** There will not be more consistency in response to potential campus safety incidents by personnel in similar positions at various higher education institutions when the institutions have all-hazards emergency management plans that include training than institutions that have all-hazards emergency management plans that do not include training. **Failed to be rejected.**

**H<sub>0</sub>5:** There will not be more knowledge of FERPA regulations when responding to potential campus safety incidents by personnel in similar positions at various higher education institutions when the institutions have all-hazards emergency management

plans that include training than institutions that have all-hazards emergency management plans that do not include training. **Rejected.**

**H<sub>0</sub>6:** Personnel in administrative positions at higher education institutions will not respond more accurately to potential campus safety incidents than personnel in non-administrative positions. **Failed to be rejected.**

Because response rates by both employee groups and institutions were too low in some cases to allow for full statistical validity, the failure to reject Null Hypothesis #1 through #4 cannot be viewed as definite evidence that the null hypotheses are true. Nor can Hypothesis #5 be viewed as definitely false. The study does provide evidence, however, that there is a questionable relationship between training and employee knowledge of all-hazards emergency management plans, and additional research is needed to determine if training, as now provided, is of any value.

Chapter 5 summarizes and analyzes the results of this research, provides recommendations to institutions and other stakeholders about emergency management planning, and suggests additional research that could expand on or clarify these findings.

## CHAPTER 5: ANALYSIS AND CONCLUSIONS

### Introduction

This chapter provides an overview of this research study, including a brief summary, purpose statement, statement of the problem, null hypotheses, and methodology. The major findings from the research are presented and analyzed, including a discussion of uncontrolled variables and limitations, followed by conclusions and recommendations for future research.

### Summary of the Study

Campus violence is a reality to institutions of higher education. The days of feeling completely safe and secure while attending a college or university no longer exist. Many campus violence incidents have occurred over the past 50 years, most notably the Virginia Tech tragedy in 2007 where 32 students and faculty lost their lives in the nation's worst mass shooting. These campus violence incidents brought to light a number of concerns related to campus safety and emergency preparedness, including concerns about comprehensive training for faculty, staff, and students and adherence to privacy laws. This research study focused on the preparedness level of administrators, faculty, and staff at public higher education institutions in Missouri to respond to potential campus safety incidents.

### *Purpose Statement*

This research study reported the relationship between active faculty/staff participation in training exercises as part of implementation of an all-hazards emergency management plan and the consistency and accuracy of response to potential campus safety incidents in higher education. The study also identified the relationship between implementation of an all-hazards emergency management plan that includes faculty/staff

participation in training exercises and knowledge of the Family Educational Rights and Privacy Act (FERPA) regulations when responding to potential campus safety incidents in higher education.

The purpose of this study was to provide research that allows colleges and universities to determine if training is effective, and if employees who say they have been trained actually indicate that they know the institution's emergency management plan and would respond appropriately when presented with potential campus safety incidents. The findings of this study reform the discussion related to the effectiveness of planning and training in preparing a college community for a violent situation. The findings also enable the researcher to make more general observations about the state of emergency management planning among institutions of higher education, based upon the wide variations in sophistication and complexity of the plans studied. It is important to note that due to low response rates in some cases, some of the findings, especially related to training, may not be representative of the institution as a whole.

### *Statement of the Problem*

Virtually everyone working in higher education today is aware of the potentiality of a violent campus incident, and most institutions now have an all-hazards emergency management plan in place. Yet little research has been performed that examines the amount of training college employees receive related to the plans, the degree of understanding faculty and staff have of the requirements of the plans, and the consistency with which they are understood across campus. Since a plan is no better than an institution's ability to implement it, a plan that is poorly or inconsistently understood will have limited value in case of a campus emergency. Research is critically needed to

determine how well the myriad of all-hazards emergency management plans have been assimilated into the culture of the institutions they are designed to protect.

### *Null Hypotheses*

The following null hypotheses were used to guide this research study.

**H<sub>0</sub>1:** Personnel at higher education institutions with an all-hazards emergency management plan that includes training will not respond more consistently to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training.

**H<sub>0</sub>2:** Personnel at higher education institutions with an all-hazards emergency management plan that includes training will not respond more accurately to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training.

**H<sub>0</sub>3:** Personnel at higher education institutions with an all-hazards emergency management plan that includes training will not have more knowledge of FERPA regulations when responding to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training.

**H<sub>0</sub>4:** There will not be more consistency in response to potential campus safety incidents by personnel in similar positions at various higher education institutions when the institutions have all-hazards emergency management plans that include training than institutions that have all-hazards emergency management plans that do not include training.

**H<sub>0</sub>5:** There will not be more knowledge of FERPA regulations when responding to potential campus safety incidents by personnel in similar positions at various

higher education institutions when the institutions have all-hazards emergency management plans that include training than institutions that have all-hazards emergency management plans that do not include training.

**H<sub>06</sub>:** Personnel in administrative positions at higher education institutions will not respond more accurately to potential campus safety incidents than personnel in non-administrative positions.

### *Methodology*

The participants in this research study were selected from public two-year and four-year colleges and universities in Missouri. The researcher selected participants who should be directly involved and have knowledge of their institution's all-hazards emergency management plan. Participants included the following from each college or university, assuming the institution has the position: president, chief academic officer, dean of student services/student affairs, registrar, faculty members, public safety director/chief of police, public safety officer, health/mental health professional, human resource director, housing director, and emergency preparedness contact person.

A web-based survey, designed by the researcher, was used to collect data. The survey included two scenarios, each followed by a series of statements related to personal and institutional responsibility. The two scenarios presented to participants were as follows:

*Scenario #1:* Dave, a student, brings a gun to school and is seen with the weapon on campus. As Brian, another student, is telling you that Dave has a gun, you hear what sounds like shots fired in an adjoining hallway in your building.

*Scenario #2:* Situation escalates. Dave takes a classroom of students and their instructor hostage.



After the second scenario was presented, the survey included statements regarding federal regulations for which respondents were asked to indicate levels of agreement.

Participants were also asked to respond to general statements regarding personal and institutional practices related to all-hazards emergency management planning and training. Participants were requested to answer the survey without referencing their institution's emergency management plan. The study utilized a five-point Likert scale, with responses ranging from strongly agree to strongly disagree. The instrument also collected demographic information related to each participant and took approximately 10 minutes for participants to complete.

From the beginning of this study, the researcher consulted with Missouri's Commissioner of Higher Education and the Higher Education Subcommittee of the Homeland Security Advisory Council. On behalf of the Higher Education Subcommittee, the Commissioner agreed to write a letter of support for this study (see Appendix B) which was provided as a link in the e-mail that was sent from the researcher to each administrator, faculty, or staff member asking for his/her participation. This letter encouraged a higher response rate than might be expected without this endorsement and request, especially from administrators.

The study employed a quantitative research design, with the dependent variables including the responses to each of the personal responsibility, institutional responsibility, and FERPA questions. These responses assisted in identifying the consistency of response to potential campus safety incidents, accuracy of response to potential campus safety incidents, and knowledge level of FERPA regulations. The independent variables included responses to the emergency management planning and training questions as well

as various demographic factors including position, classification of position, status as emergency management coordinator at his/her institution, employment at a two-year or four-year institution, name of institution, number of years in current position, number of years in profession, highest degree earned, gender, and age.

The General Linear Model (GLM) – multivariate analysis with multiple criterion variables was used to analyze data and served to identify what independent variables were significant in the presence of all dependent variables. Additionally, this statistical tool allowed the researcher to use between-subjects effects to determine if a relationship existed between the dependent variables and each of the significant independent variables. Data were also analyzed using crosstabulations and case summaries.

Crosstabulations were used to identify relationships between dependent variables and/or independent variables. For example, crosstabulations were used to determine consistency in response for all personal responsibility, institutional responsibility, and FERPA questions by institution and by classification. Crosstabulations also served to identify how institutions responded to various demographic and emergency management independent variables. The study utilized case summaries to identify the accuracy in response for the personal responsibility and FERPA questions by institution and by classification within institution.

### Summary of the Major Findings

This research addressed significant gaps in the literature; first by indicating how well emergency management plans are understood and can be followed at colleges and universities when presented with potential campus safety incidents, and second by addressing how well employees are educated in the nuances of FERPA when considering

incidents of campus violence. Following is a summary of the major findings of this research study.

### *Emergency Management Plans*

The literature stresses the importance of having a comprehensive emergency management plan that includes clear and consistent guidelines (Rollo and Zdziarski, 2007). One of the criticisms of Virginia Tech was that their institution's emergency management plan did not include response to an active shooter situation (Virginia Tech Review Panel, 2007). This research study demonstrated that by standards recommended following the Virginia Tech incident, not all emergency management plans are comprehensive in Missouri, and employees at even fewer colleges are aware of the degree of instruction provided by their plans. The researcher discovered that of the 27 emergency management plans reviewed, 89% included information on how to respond to an active shooter situation, while 56% of plans addressed a hostage situation. However, participants were not very knowledgeable about these inclusions, especially the hostage situation, and some indicated that their plan included response to a campus violence situation when in actuality, it did not. Seventy percent of respondents were at least 50% accurate regarding the inclusion of an active shooter situation in their emergency management plan, and only 37% were at least 50% accurate regarding the inclusion of a hostage situation. Therefore, many respondents were not aware of what information is included in their institution's emergency management plan. Additionally, the researcher found little information pertaining to institutional responsibilities in the event of a campus safety incident. Few plans addressed the proper protocol for communication and lockdown procedures when a campus safety incident occurs.

In addition to the lack of comprehensiveness of emergency management plans, there were inconsistencies in the plans. A variety of emergency management guidelines existed for both community colleges and four-year colleges and universities in the state, including full-scale plans, brochures, quick reference guides, flip charts, and informational web pages. The documents ranged from one page to over 40 pages and were referred to by various names, including emergency management plans, emergency action plans, emergency operations plans, emergency response plans, emergency response guides, campus emergency preparedness guides, emergency procedures, and crisis management plans. With this broad variation in the comprehensiveness of planning documents and because emergency management plans are specifically designed for each institution, a set of best practices for plans could prove very beneficial for our higher education institutions.

To be fully effective, an emergency management plan needs to be shared with all employees at a higher education institution. Data showed that 18% of respondents indicated that they were not aware that their institution had an emergency management plan.

While most emergency management plans appear to have been updated since the Virginia Tech shootings, the researcher discovered that some plans were very outdated. Three plans in particular caught the researcher's attention. In addition to lacking comprehensiveness, the first plan did not specifically address how to respond to various types of crisis situations. General information was included in the plan which was expected to apply to the many types of incidents that may occur on a college campus. Since each crisis has different requirements and needs, the researcher finds it very

difficult to use a “one size fits all approach” with emergency management planning. The next two plans provided sufficient detail on how to respond to various crisis situations such as fires, tornados, etc. However, there was no direction on how to respond to any type of campus violence incident. As prevalent as campus shootings have been over the last few years, it was very surprising that plans have not been updated to include guidance for responding to this potentially life-saving type of crisis situation.

### *Training*

The U.S. Department of Education (2007) stressed the importance of training in order to successfully implement an emergency management plan. The literature indicated that training was occurring more frequently since the Virginia Tech tragedy (Kennedy, 2008). However, participants in this research did not agree. The data indicated there was a lack of training that occurs at the public higher education institutions in Missouri. Only 35% of participants strongly agreed or agreed that they participate in training and/or drills related to campus violence incidents at least annually. Administrators indicated the greatest participation in training, followed by staff, and then faculty who indicated participation in the least amount of training.

Data indicated that mandatory training related to campus violence occurs on a limited basis; however, it occurs more frequently for full-time employees than part-time employees. Respondents reported that 37% of administrators, 27% of full-time staff, and 26% of full-time faculty participate in mandatory training, while only 17% of part-time staff, 15% of part-time faculty, and 14% of student workers participate in mandatory training.

The premise of this study was that institutions that participate in training exercises as part of their emergency management plan will be better prepared to respond to campus

violence incidents. The data reported that participation in training did not indicate that an institution was better prepared to respond to potential campus safety incidents. Five of the six hypotheses in this research suggested that training will result in more consistency and accuracy of response as well as greater knowledge of FERPA regulations, yet the following review of hypotheses indicates that only one of the null hypotheses was rejected.

*Null Hypothesis #1*

**H<sub>0</sub>1:** Personnel at higher education institutions with an all-hazards emergency management plan that includes training will not respond more consistently to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training.

The data from this study supported this null hypothesis. Overall, there was a higher percentage of consistency in response to the institutional responsibility questions than to the personal responsibility questions for the active shooter and the hostage scenarios, even though many of the emergency management plans did not address the institutional responsibility questions. For both the active shooter and hostage scenarios, the mean percentage of consistency for the institutional responsibility questions ranged from 82% to 100% with a mean of 95% for the active shooter scenario and a mean of 96% for the hostage scenario. This was much higher than the mean percentage of consistency for the personal responsibility questions, which ranged from 71% to 100% for the active shooter scenario with a mean of 83% and from 60% to 100% for the hostage scenario with a mean of 75%.

Without further study, the researcher can only speculate as to why consistency of response to institutional responsibility questions was so high among employees whose plans did not address these circumstances. One possibility is that the institutional responsibility questions may be less controversial and less prone to uncertainty. It may be simpler to determine how the institution as a whole should respond than to determine what any specific individual should do. It may also be the case that exposure to the significant media coverage given to incidents such as the Virginia Tech shootings has provided a de facto ‘universal’ training for the public as to how institutions should respond in this type of crisis. A third possibility is that training is occurring in formats other than through on-campus programs, such as statewide or national workshops or through publications read by employees – both training measures that this study did not evaluate.

Based on participant responses, participation in training provided through the emergency management plan did not affect the consistency of response for the active shooter and hostage scenarios in this study. There was much variation when reviewing the level of training that participants indicated they received and the consistency of response. For example, 18 of the 29 institutions reported at least an 80% mean percentage of consistency on the personal responsibility questions for the active shooter scenario. However, participants at 11 of the 18 institutions indicated that only 30% or fewer participate in training exercises related to campus violence at least annually. The hostage scenario presented the same picture. While 13 institutions reported at least a 75% mean percentage of consistency on the personal responsibility questions, seven of these institutions indicated that 25% or fewer participate in training.

Based on the above results, Null Hypothesis #1 failed to be rejected. Personnel at higher education institutions in Missouri with an all-hazards emergency management plan that includes training did not respond more consistently to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that did not include training. Although mean consistency rates were at least 75% for both scenarios, further research should be conducted with more representative rates of participation in institutional training to re-evaluate the impact of training on consistency of response to potential campus safety incidents at higher education institutions.

*Null Hypothesis #2*

**H<sub>0</sub>2:** Personnel at higher education institutions with an all-hazards emergency management plan that includes training will not respond more accurately to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that does not include training.

Accuracy of response focused exclusively on the personal responsibility questions since most plans did not include information about institutional responsibility and was slightly higher for the active shooter scenario than the hostage scenario. The mean percentage of accuracy for the active shooter scenario ranged from 64% to 93% with a mean of 79%. The mean percentage of accuracy for the hostage scenario ranged from 50% to 100% with a mean of 76%. A plausible explanation for greater accuracy in response is that more emergency management plans addressed an active shooter situation than a hostage situation. Here again, it is also possible that a universal training



phenomenon has occurred through public discussion about high profile campus shooting incidents, while less has been written and discussed in the media about hostage situations.

Based on participant responses, participation in training did not indicate that personnel will respond more accurately to the active shooter or hostage scenarios. Two institutions with a high mean percentage (93% and 89%) of accuracy and two institutions with the lowest mean percentage (70% and 64%) of accuracy for the active shooter scenario all indicated no participation in training exercises. There was as much variation for the hostage scenario. While one institution indicated a 92% mean accuracy with 67% participation in training, another institution reported a 90% mean accuracy with 20% participation in training. The one institution that indicated 100% accuracy in response only reported 38% participation in training.

Based on the above results, Null Hypothesis #2 failed to be rejected. Personnel at higher education institutions in Missouri with an all-hazards emergency management plan that includes training did not respond more accurately to potential campus safety incidents than personnel at institutions with an all-hazards emergency management plan that did not include training. Although mean accuracy rates were at least 75% for both scenarios, further research should be conducted with more representative rates of participation in institutional training to re-evaluate the impact of training on accuracy of response to potential campus safety incidents at higher education institutions.

### *Null Hypothesis #3*

**H<sub>0</sub>3:** Personnel at higher education institutions with an all-hazards emergency management plan that includes training will not have more knowledge of FERPA regulations when responding to potential campus safety incidents than personnel at

higher education institutions with an all-hazards emergency management plan that does not include training.

The Virginia Tech tragedy demonstrated that FERPA was not well understood across campus. Faculty members did not share information about their concerns with Cho's behavior with his parents or their colleagues (Virginia Tech Review Panel, 2007). The Virginia Tech Review Panel (2007) stated "Information privacy laws are intended to strike a balance between protecting privacy and allowing information sharing that is necessary or desirable. Because of this difficult balance, the laws are often complex and hard to understand" (p. 63). The Review Panel expressed concern about the lack of understanding of FERPA and the inconsistent practice when applying privacy laws.

FERPA causes much concern for employees of higher education institutions who feel vulnerable to public sanction if they release information concerning students in violation of federal law. This research showed that many individuals are still unfamiliar with the provisions of FERPA and what information may be released. The questions in this research asked if information regarding Dave's behavior may be released to his parents, to colleagues, and to students. In all cases, the answer is yes. Behavior that is observed and not part of a student's educational record may be released. As stated by the Virginia Tech Review Panel (2007):

Nothing in FERPA prohibits a school official from sharing with parents information that is based on that official's personal knowledge or observation and that is not based on information contained in an education record. Therefore, FERPA would not prohibit a teacher or other school official from letting a parent

know of their concern about their son or daughter that is based on their personal knowledge or observation. (p. H-7)

Furthermore, if a situation rises to the level of an emergency that impacts the health and/or safety of faculty, staff, or students, FERPA allows the release of confidential information from a student's educational record (FERPA, 2008). The Virginia Tech Review Panel proposed that additional flexibility and clarification be allowed with the emergency exception of FERPA. In January of 2009, the Department of Education updated FERPA regulations in an effort to provide more definitive language as to when an institution may release confidential student information. A small portion of the updated regulations follows:

An educational agency or institution may take into account the totality of the circumstances pertaining to a threat to the health or safety of a student or other individuals. If the educational agency or institution determines that there is an articulable and significant threat to the health or safety of a student or other individuals, it may disclose information from education records to any person whose knowledge of the information is necessary to protect the health or safety of the student or other individuals. (FERPA, 2008, p. 74854)

Even though FERPA regulations have been updated to provide more guidance, employees are still uncomfortable with the ambiguity of FERPA and are very hesitant to release information. This research demonstrated this finding. Participants were not comfortable releasing information regarding Dave's behavior to his parents, to colleagues, and to students. Although mean percentages were low, participants were most comfortable releasing information to their colleagues (56%), followed by Dave's parents

(31%), and then students (20%). This hesitation may well be a reflection of the constant emphasis that is placed by higher education institutions on student privacy, with a general proviso that the law is less restrictive when it comes to sharing information within the academic setting for legitimate educational purposes. Respondents would therefore be more inclined to feel that information could be shared with colleagues.

Based on participant responses, participation in training did not indicate that personnel will have more knowledge of FERPA regulations. Although training participation levels ranged from 0% to 100%, there was much inconsistency in response. The one institution that indicated 100% participation in training was most likely to release information regarding Dave's behavior to colleagues (60%), followed by students (20%), and then parents (0%). Another institution reported 79% participation in training and had much higher percentages that were willing to release information, with 73% indicating that they would release information concerning Dave's behavior to their colleagues, 60% to Dave's parents, followed by 40% who would release information to students. An institution with 71% participation in training had 57% agreement to release information to colleagues, followed by 43% who would release information to Dave's parents and to students.

There were also five institutions where respondents reported no participation in training. At four of the five institutions, respondents were much more willing to release information to their colleagues with percentages of agreement ranging from 56% to 83%. At three of the five institutions, participants were more likely to release information to Dave's parents than to students, where percentages ranged from 29% to 40%. In summary, while there was most agreement that information regarding Dave's behavior

may be released to colleagues, there was still not consensus that FERPA permits this release of information, and training showed no effect on correct response.

Based on the above results, Null Hypothesis #3 failed to be rejected. Personnel at higher education institutions in Missouri with an all-hazards emergency management plan that includes training did not have more knowledge of FERPA regulations when responding to potential campus safety incidents than personnel at higher education institutions with an all-hazards emergency management plan that did not include training. Many college employees receive some training related to FERPA from college colloquia, from professional meetings, and from publications related to their disciplines. It is quite possible that this training which emphasizes caution in releasing student information to anyone is generalized by employees to include crisis situations. Further research should be conducted with more representative rates of participation in institutional training to re-evaluate the impact of training on knowledge of FERPA regulations when responding to potential campus safety incidents at higher education institutions.

#### *Null Hypothesis #4*

**H<sub>0</sub>4:** There will not be more consistency in response to potential campus safety incidents by personnel in similar positions at various higher education institutions when the institutions have all-hazards emergency management plans that include training than institutions that have all-hazards emergency management plans that do not include training.

Overall, faculty in the study provided the most consistent responses; however, they reported the least amount of training at 23%. Administrators indicated the greatest participation in training at 58% but did not respond most consistently on any category of

the questions. When looking specifically at personal responsibility, institutional responsibility, and FERPA questions by classification, all responses in each group of questions did not differ by more than 7%. For the personal responsibility questions, mean responses ranged from 78% to 82% with staff reporting the greatest consistency. Faculty reported the highest mean consistency for the institutional responsibility questions with responses ranging from 92% to 96%. For the FERPA questions, mean responses ranged from 60% to 67% with faculty, once again, reporting the greatest consistency.

Based on the above results, Null Hypothesis #4 failed to be rejected. There was not more consistency in response to potential campus safety incidents by personnel in similar positions at various higher education institutions in Missouri when the institutions have all-hazards emergency management plans that include training than institutions that have all-hazards emergency management plans that did not include training. Further research should be conducted with more representative rates of participation in institutional training to re-evaluate the impact of training on consistency of response among personnel in similar positions at various higher education institutions.

#### *Null Hypothesis #5*

**H<sub>0</sub>5:** There will not be more knowledge of FERPA regulations when responding to potential campus safety incidents by personnel in similar positions at various higher education institutions when the institutions have all-hazards emergency management plans that include training than institutions that have all-hazards emergency management plans that do not include training.

Administrators responding to the survey had the greatest knowledge of FERPA regulations and reported the greatest participation in training (58%) as part of their emergency management plan. Seventy-seven percent of administrators agreed that

information regarding Dave's behavior may be released to their colleagues, followed by 69% who agreed that information may be shared with Dave's parents, and 43% who indicated that information may be released to students. Staff members indicated the second highest participation in annual training (50%) and also reported the second greatest level of knowledge of FERPA regulations. Seventy-one percent of staff members indicated that information regarding Dave's behavior may be shared with their colleagues, followed by Dave's parents at 58%, and then students at 38%. Faculty members reported the least agreement that information regarding Dave's behavior may be released and also indicated the lowest level of participation in training (23%). While 48% of faculty members indicated agreement that they may release information to their colleagues, only 13% indicated agreement to release information to Dave's parents, followed by 10% to students.

Based on the above results, Null Hypothesis #5 is rejected. There is more knowledge of FERPA regulations when responding to potential campus safety incidents by personnel in similar positions at various higher education institutions in Missouri when the institutions have all-hazards emergency management plans that include training than at institutions that have all-hazards emergency management plans that did not include training.

Based on participant responses, the findings discussed above indicate that training does not increase the consistency or accuracy of responses to questions concerning how an individual or institution should respond to a campus crisis situation. However, research results in this study do support the value of training in informing employees about FERPA. These results suggest that colleges and universities should commence

and/or update training programs related to FERPA at their respective institutions as soon as possible and should require this training of all faculty and staff.

*Null Hypothesis #6*

**H<sub>0</sub>6:** Personnel in administrative positions at higher education institutions will not respond more accurately to potential campus safety incidents than personnel in non-administrative positions.

Overall, non-administrators responded more accurately to questions concerning a potential campus safety incident than did administrators. For the active shooter scenario, administrators responded more accurately at 10 institutions, while non-administrators responded more accurately at 11 institutions. Accuracy for administrators ranged from 57% to 100%, while accuracy for non-administrators ranged from 64% to 94%. For the hostage scenario, non-administrators responded more accurately at nine institutions, while administrators responded more accurately at five institutions. Administrators and non-administrators both reported 100% accuracy on all personal responsibility questions at one institution. Accuracy ranged from 25% to 100% for administrators and from 42% to 100% for non-administrators.

Based on the above results, Null Hypothesis #6 failed to be rejected. Personnel in administrative positions at higher education institutions in Missouri did not respond more accurately to potential campus safety incidents than personnel in non-administrative positions. Since the response rate by administrators was 75% in this study, the researcher is confident in the statistical validity of this analysis. Further research should be conducted to determine what interventions can ensure that all personnel are responding accurately to potential campus safety incidents.



### Uncontrolled Variables and Limitations

There were several variables that were not under the control of the researcher during this study, and there was no way to know the exact impact that these variables had on the study. It is believed, however, that the results have not been altered significantly.

Following is a list of these variables.

1. There was no mechanism to control if participants referenced their institution's emergency management plan when responding to the survey. This could have affected the percentage of accurate responses to the personal responsibility questions.
2. There was a much higher percentage of administrators who completed the survey than faculty and staff. Since administrators, faculty, and staff were not required to participate in the study, the voluntary nature of response resulted in limited responses by staff in particular and uneven responses by institution.
3. The number of community colleges participating in this research study was larger than the number of public four-year colleges and universities. However, there are more community colleges in Missouri than public four-year institutions.
4. The number of faculty who participated was much greater from community colleges than from four-year institutions.
5. Some institutions either requested or volunteered to encourage participation in this study, while others did not.
6. Although the pilot study did not indicate any confusion with the three FERPA questions, a few participants expressed concern about these questions after completing the survey.

7. This study was limited to Missouri colleges and universities. The results may not be indicative of the levels of planning or of the effectiveness of training in other states.

### Conclusions

Based on the major findings of this study, a number of conclusions can be drawn about the state of emergency preparedness of the public higher education institutions in Missouri. These conclusions are based on the data collected for this research study and due to response rates being low in some cases, conclusions about training may not be representative of all institutions across the state of Missouri.

1. While most institutions have emergency management plans in place, these plans are not well read or understood. Overall, 18% percent of individuals who responded to this study were not even aware that their institution had an emergency management plan, and 38% of respondents admitted that they had not read their institution's plan. Many respondents also reported that their institution's plan included an active shooter or hostage situation when in actuality, this guidance was not provided. Individuals at three institutions reported the inclusion of an active shooter scenario incorrectly at percentages ranging from 64% to 80%. Respondents from eight institutions reported agreement of 43% to 70% that their plan included response to a hostage situation when it did not provide this guidance.
2. Many emergency management plans are not comprehensive and are inconsistent across the state of Missouri. The researcher discovered that many types and sizes of plans exist in Missouri. Plans were as simple as a quick reference guide or

brochure and as detailed as a full-scale plan and ranged from one to over 40 pages. The content related to campus violence also varied. Three emergency management plans, or 11%, did not include information on response to an active shooter situation, while 12 plans, or 44%, did not address a hostage situation.

3. Minimal participation in annual training as part of emergency management planning occurs at our public higher education institutions in Missouri, especially for faculty. Thirty-five percent of respondents indicated participation in annual training related to campus violence incidents. Administrators reported the greatest participation in training at 58%, followed by staff at 50%, and faculty at 23%. Respondents also indicated that mandatory training is more likely to occur for full-time employees (administrators – 37%, staff – 27%, and faculty – 26%) as opposed to part-time employees (staff – 17%, faculty – 15%, student workers – 14%).
4. Participation in training does not indicate that an institution is better prepared to respond to campus safety incidents. The hypotheses in this study suggested that institutions with emergency management plans that include training would experience more consistency and accuracy of response to potential campus safety incidents as well as more knowledge of FERPA regulations. However, only one null hypothesis was rejected. Participation in training as part of an emergency management plan only affected the knowledge level of FERPA regulations by personnel in similar positions. Administrators participated in the most annual training related to campus violence incidents at 58% and indicated the greatest knowledge of FERPA regulations. Staff members reported the second highest

participation in annual training at 50% and also indicated the second greatest level of knowledge of FERPA regulations. Faculty members reported the least agreement that information may be released and also indicated the lowest level of participation in training at 23%.

5. Employees do not understand what information may be shared under FERPA as well as what information is not subject to FERPA regulations. This study confirmed that personnel in higher education are reluctant to share information for fear that they will be violating student privacy regulations. Although updated FERPA regulations provide a greater degree of latitude for releasing confidential student information in the event that the health or safety of a student or other individuals is seriously compromised, respondents indicated a concern for releasing this information. Although limited, respondents were most comfortable sharing information with their colleagues, followed by Dave's parents, and then students.
6. Some institutions, and some individuals, are hesitant to discuss or evaluate emergency preparedness in response to campus safety incidents. Four institutions declined to participate in this study, and one individual asked to be removed from the study. Upon receipt of the survey, a number of individuals immediately forwarded the survey to another employee who he/she believed would be more knowledgeable about campus safety. Additionally, the researcher was unable to obtain emergency management plans from two institutions. This resistance causes much concern in an era where emergency preparedness is imperative for all institutions of higher education.

### Recommendations for Further Research

During the course of analyzing the hypotheses specific to this study, the researcher discovered additional areas that would complement or further this research on the emergency preparedness of higher education institutions. Future researchers are encouraged to review these topics to provide additional insight and guidance into the increasingly important topic of emergency preparedness in higher education. Specific suggestions for additional research related to these hypotheses were included at the end of each hypothesis critique and listed a number of areas in which further research is needed to determine how college employees learn about crisis response. A number of other areas of needed research were also discovered and are reviewed below.

1. With emergency management plans as varied and incomplete as many were found to be, additional research needs to examine why institutions that are aware that campus violence is a clear and present danger have chosen not to adequately prepare for such a crisis.
2. A comprehensive review of the differences in emergency preparedness plans between two-year and four-year public institutions in Missouri could provide valuable research. There are significant differences between community colleges and four-year colleges and universities (i.e., admissions requirements, on-campus housing, large athletic programs, the pressures of upper division and graduate work) that could affect the preparedness level of these institutions, and it would be useful to know if these differences are reflected in their plans.
3. A comparison of emergency preparedness planning between public and private higher education institutions in Missouri would also be useful. The nature of

public vs. private institutions could significantly impact the preparedness level of these institutions and what should be included in an effective plan.

4. Colleges and universities increasingly rely on adjunct faculty to teach as well as part-time staff to provide service. However, these employees are transient, may only be employed temporarily, and may have the least knowledge of campus policies and procedures. A survey of these part-time faculty and staff may reveal valuable data on the preparedness level of these employees.
5. Students are central to safety and security issues in higher education. Surveying students about how they would respond to potential incidents of campus violence could also provide useful research. The majority of community college students are transient, while students at four-year institutions are more likely to be residential. This variable could definitely impact the preparedness level of students by campus type and should be examined.
6. All-hazards emergency management planning does not focus solely on campus violence. Additional research should focus on emergency preparedness for natural disasters, severe weather, or other types of all-hazards incidents.
7. Since the FERPA questions caused some confusion for a few respondents, these questions could be rewritten and expanded on to conduct a more detailed review of the level of understanding of the nuances of FERPA.
8. This study included only Missouri colleges and universities, where emergency management planning may not be indicative of what is happening elsewhere in the country. Similar studies should be conducted in other states to determine if emergency planning is similarly varied.

### Concluding Remarks

This research has been critical in identifying the emergency preparedness levels of our public higher education institutions in Missouri. While the research showed that our institutions are prepared to respond to incidents of campus violence to greatly varying degrees, there are some fundamental steps that can be taken to increase the preparedness level of our colleges and universities. A set of best practices should be developed for emergency management plans. The Higher Education Subcommittee of the Homeland Security Advisory Council could assist in researching and developing these best practices. Additionally, statewide training exercises could assist with institutions being uniformly trained to respond to incidents of campus violence. The Higher Education Subcommittee could coordinate statewide training programs to assist our colleges and universities with emergency preparedness. These steps alone will assist our institutions in increasing their preparedness levels to respond to incidents of campus violence.

The researcher undertook this study fully expecting to find that both the comprehensiveness of plans, and the amount of training required by plans, would have a significant and measurable effect on how consistently and accurately employees responded to campus safety incidents. Surprisingly, neither was found to be the case. Despite low response rates from staff and uneven responses by institution, the researcher believes that emergency planners in the state would benefit from re-examining how plans are presented to employees, and how training occurs, to determine how emergency planning can be made more effective.

The researcher also expected respondents to be much more knowledgeable about the provisions of FERPA. It was shocking that in these potential crisis situations,

individuals were reluctant to share information that could help protect the safety of their colleagues and students. With as much publicity as student privacy regulations have received over the past few years, the researcher fully believed that employee understanding of FERPA would have been greater.

It was also disconcerting to learn that some colleges and a number of individuals did not care to discuss emergency preparedness. This hesitation seems unhealthy in an environment in which all employees should be fully aware of how both they and their institutions should respond to a campus crisis situation. Campuses must raise both the level of discussion and comfort with this topic if personnel are to be adequately prepared to respond.

On a positive note, individuals showed a surprising degree of intuitive understanding of how they should respond to a campus violence incident. This may suggest that there has been increased public awareness and consciousness that serves as universal training and could be used to enhance this knowledge. This study should be only the first of many steps to improve emergency preparedness for institutions of higher education in Missouri and across the United States.



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## APPENDIX A

**Campus Safety Survey**

Please complete this survey without referencing your institution's emergency management plan.

**Scenario #1: Dave, a student, brings a gun to school and is seen with the weapon on campus. As Brian, another student, is telling you that Dave has a gun, you hear what sounds like shots fired in an adjoining hallway in your building.**

I feel well prepared to respond to this situation.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

As soon as I hear shots fired, I would:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Leave my office/classroom to see what was happening	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lock my office/classroom door	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Call the Director of Public Safety/Chief of Police	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Call 911	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alert the campus community that there is an armed person on campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do nothing ☐ ☐ ☐ ☐ ☐

If I learn that someone has been injured by the gunman, I would:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Assist the injured person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confront the gunman	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Call the Director of Public Safety/Chief of Police	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Call 911	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alert the campus community that someone has been injured	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do nothing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

When my institution is aware that there is a gunman on campus, my institution is responsible for:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Notifying the campus community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calling 911	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Locking down the campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Maintaining  
regular  
communication  
with the  
campus  
community

☐ ☐ ☐ ☐ ☐

When shots have been fired, my institution is responsible for:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Notifying the campus community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calling 911	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Locking down the campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintaining regular communication with the campus community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Scenario #2: Situation escalates. Dave takes a classroom of students and their instructor hostage.**

I feel well prepared to respond to this situation.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

If I were taken hostage, I would:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Confront Dave physically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confront Dave verbally	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Try to establish a rapport with Dave	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Be observant of my surroundings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

When my institution becomes aware that there is a hostage situation on campus, my institution is responsible for:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Notifying the campus community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calling 911	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Locking down the campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintaining regular communication with the campus community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Family Educational Rights and Privacy Act (FERPA) - Student Privacy Rights**

FERPA allows me to release information regarding Dave's behavior to his parents.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

FERPA allows me to release information regarding Dave's behavior to my colleagues.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

FERPA allows me to release information regarding Dave's behavior to students.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

**General Questions Regarding Your Institution's Emergency Management Plan**

My institution has implemented an emergency management plan.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

I have read my institution's emergency management plan.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

My institution's emergency management plan addresses an active shooter situation.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

My institution's emergency management plan addresses a hostage situation.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

I was involved in the development of my institution's emergency management plan.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

I participate in training and/or drills related to campus violence (e.g., active shooter and/or hostage situation) at least annually as part of my institution's emergency management plan.

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

Participation in training and/or drills related to campus violence (e.g., active shooter and/or hostage situation) is mandatory for the following at my institution:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Administrators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Full-time faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Part-time faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Full-time staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Part-time staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student workers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Demographic Questions

Position

Classification

- ☐ Administrator
- ☐ Faculty
- ☐ Staff



Are you the emergency management coordinator at your institution?

- ☐ Yes
- ☐ No

Are you employed at a two-year or four-year institution?

- ☐ Two-year
- ☐ Four-year

At which institution are you employed?

- ☐ Crowder College
- ☐ East Central College
- ☐ Jefferson College
- ☐ Linn State Technical College
- ☐ Metropolitan Community College-Blue River
- ☐ Metropolitan Community College-Business and Technology
- ☐ Metropolitan Community College-Longview
- ☐ Metropolitan Community College-Maple Woods
- ☐ Metropolitan Community College-Penn Valley
- ☐ Mineral Area College
- ☐ Missouri State University-West Plains
- ☐ Moberly Area Community College
- ☐ North Central Missouri College
- ☐ Ozarks Technical Community College
- ☐ St. Charles Community College
- ☐ St. Louis Community College-Florissant Valley
- ☐ St. Louis Community College-Forest Park
- ☐ St. Louis Community College-Meramec
- ☐ St. Louis Community College-Wildwood
- ☐ State Fair Community College
- ☐ Three Rivers Community College
- ☐ Harris-Stowe State University
- ☐ Lincoln University
- ☐ Missouri Southern State University
- ☐ Missouri State University

- ☐ Missouri University of Science and Technology
- ☐ Missouri Western State University
- ☐ Northwest Missouri State University
- ☐ Southeast Missouri State University
- ☐ Truman State University
- ☐ University of Central Missouri
- ☐ University of Missouri-Columbia
- ☐ University of Missouri-St. Louis
- ☐ University of Missouri-Kansas City

Number of years in current position

Number of years in profession

What is the highest degree you have earned?

- ☐ Associate's degree
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Doctoral degree
- ☐ None

Gender

- ☐ Male
- ☐ Female

Age

## APPENDIX B



April 4, 2011

Dear Colleague:

I am writing to advise you about a statewide research study on campus safety being conducted by Kim Harvey, a Ph.D. candidate in Educational Leadership and Policy Studies at the University of Missouri – St. Louis. Ms. Harvey has been coordinating her research with the Higher Education Subcommittee of the Homeland Security Advisory Council (HES-HSAC) to ensure that her research study will provide a valuable resource for the state of Missouri.

The study entitled, "Exploring the Relationship between Planning and Training, and Response to Campus Safety Incidents", will provide information on the effectiveness of training in preparing the college community for violent situations.

During the month of April 2011, Ms. Harvey will be sending an electronic survey to a select group individuals that may include one or more key administrators, faculty, and staff at your institution. Campus safety is a high priority for the state and for our Homeland Security Advisory Council, and full participation is encouraged to provide a complete picture of emergency readiness in the state. Please be assured that results of this study will be presented in aggregate form and that no data will be associated with any individual or institution.

I appreciate your support of Ms. Harvey's research on campus safety at our public colleges and universities. If you have any questions, please feel free to contact Angelette Prichett, MDHE staff liaison to the HES-HSAC, at (573) 522-2150.

Regards,

A handwritten signature in dark ink, appearing to read "David R. Russell".

David R. Russell, Ph.D.  
Commissioner of Higher Education

cc: Angelette Prichett

## APPENDIX C

Dear Respondent:

I am a doctoral student in the College of Education at the University of Missouri-St. Louis under the advisement of Dr. Kent Farnsworth ([farnsworthk@umsl.edu](mailto:farnsworthk@umsl.edu)) and Dr. Lloyd Richardson ([lloyd\\_richardson@umsl.edu](mailto:lloyd_richardson@umsl.edu)) and need your assistance. I am conducting a research study on institutional preparedness for campus violence, in collaboration with the Commissioner of Higher Education and the Higher Education Subcommittee of the Homeland Security Advisory Council (see attached [letter of support](http://vega.jeffco.edu/register/kim/letter_of_support.pdf)). The objective of this research is to attempt to understand the preparedness level of faculty and staff when responding to potential campus safety incidents. Through your participation, we hope to understand more about how emergency management planning and training affect the level of preparedness of faculty and staff, and how they can be made more effective. You have been selected to participate because of your role at the institution.

Following is a link to a web-based survey. The survey provides two campus safety scenarios that I think you will find particularly interesting, followed by a series of questions related to personal and institutional responsibility, as well as knowledge of student privacy regulations. There are also questions related to emergency management planning and training at your institution. Additionally, there are a few demographic questions asked at the end of the survey. The survey will take approximately 10 minutes to complete.

I will keep all data collected under lock and key. When the results of this survey are published or discussed with the Commissioner, the Higher Education Subcommittee, or at conferences, no identifying information will be included. If you choose to participate, you have the right not to answer any question(s) you do not want to answer. Your participation will constitute consent to have your responses used in my study in the aggregated form mentioned, and you may withdraw from participation in this study at any time.

I hope you will take a few minutes to complete this survey. Each public two-year and four-year college and university in Missouri is involved, and full participation is needed to provide a complete picture of emergency readiness in the state. Campus violence is of growing concern to higher education institutions, and your participation will help identify the preparedness level of our institutions when responding to potential incidents of campus violence.

If you have any questions or concerns about completing the survey or participating in this study, you may contact me by phone at 636-797-3000, ext. 207, or by e-mail at [kh Harvey@jeffco.edu](mailto:kh Harvey@jeffco.edu). If you have any questions about your rights as a research subject, you may contact the University of Missouri-St. Louis, Office of Research Administration by mail at 341 Woods Hall, One University Boulevard, St. Louis, MO 63121-4400, by phone at 314-516-5899, or by e-mail at [ora@umsl.edu](mailto:ora@umsl.edu).

Sincerely,

Kimberly M. Harvey  
Registrar  
Jefferson College